

COUNTRY GUIDE

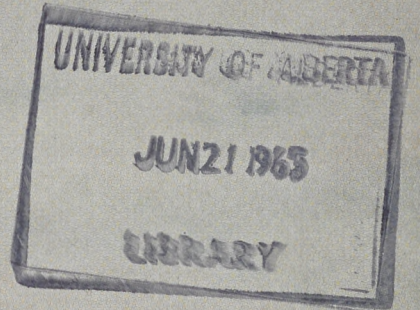
THE FARM MAGAZINE

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GENERAL SCIENCE



JUL 1965 -



MF 300 with up to 13-ft. cut for grains and beans. Low-cut knife design, just right for soybeans. Also with Corn Heads—2-row MF 222, 3-Row MF 322, and 3-Row MF 321 (narrow row). Saddle Tank Design...18 on-the-go controls. With fuel-saving 72 hp diesel or gasoline engines. 56 bu. tank—70 bu. with extensions.



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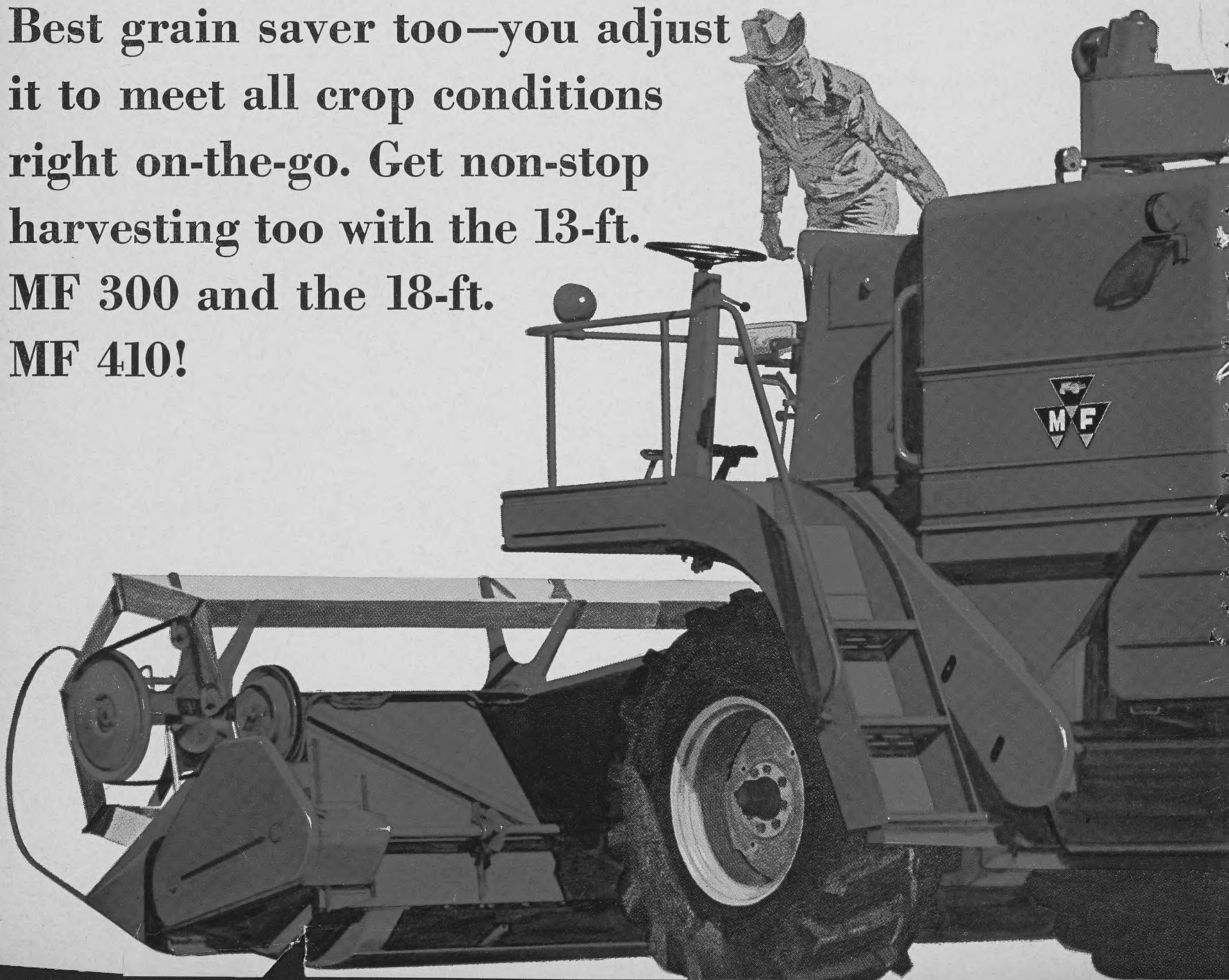
GETS ALL THE CROP HARVESTING NON-STOP!

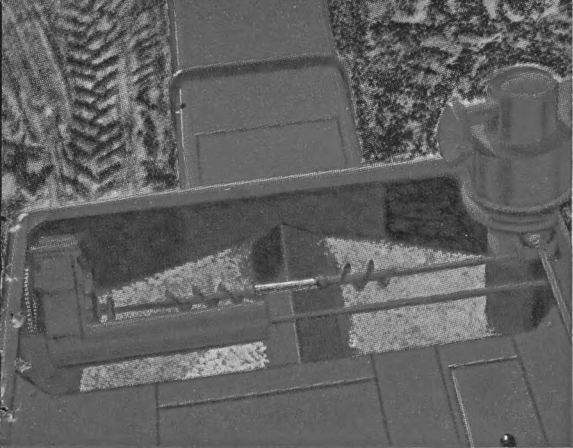
Biggest capacity MF Combine ever, the MF 510.

Best grain saver too—you adjust it to meet all crop conditions right on-the-go. Get non-stop harvesting too with the 13-ft.

MF 300 and the 18-ft.

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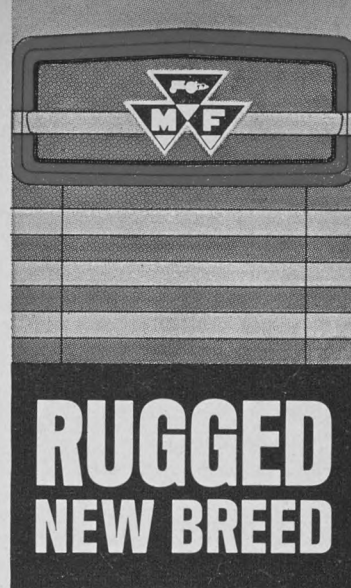




Saddle Tank Design holds more grain; keeps weight low and balanced on both sides of machine for stability. Gives operator a full view all around. Unloads a bushel a second.



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“Let’s look at all three Gleaners, and figure the right one for you!”

GLEANER C^{II} in wheat—headers 12 to 24 feet



"I realize this is an important investment, Bill," continued Joe, the Allis-Chalmers dealer, "So I want to be sure you have all the facts you need."

Bill Harper nodded, smiling.

"Now one of the first things you notice about the GLEANER," Joe went on, "Is how we put the cylinder down front. Know why?"

"I think so, Joe," Bill said, "It gives you more room for separating area, doesn't it?"

"Yes, but that's the *second* benefit, Bill. The first is that the down front cylinder permits *controlled* feeding. But you're right that the space saved lets us put 49 square feet of separating area in the CII, 40 square feet in the AII and 33 in the Model E. So you can save more of your crop and put a cleaner product in the bin. Now let's talk about operating costs . . ."

Bill broke in with "Low upkeep sure interests me, Joe."

"Well, Bill, the simplest way to put it is that GLEANERS cost less to maintain because of the way they're *built*. Heaviest main frame in the industry—weight distributed

evenly fore and aft, side to side, so that *wear* is balanced out, too. Then, I'm sure you've noticed how smooth and quiet the GLEANER is when it's running?"

"I sure have," answered Bill. "And to me that says there is a lot of quality and long life built in."

"Right, Bill—so naturally a GLEANER will stay in action longer and its value will hold up longer, too."

Bill asked, "What's this new variable speed cylinder control I've been hearing about?"

"Bill, it's a feature you're really going to appreciate if your crop has ripened unevenly, or is tough to handle in early morning or late evening. On the CII and AII you can change cylinder speed just enough to compensate—without leaving the operator's seat."

"Sounds good," Bill agreed. "We need a combine that'll handle lots of crops, Joe, the way we are farming our place. We're diversified."

"Bill, you just can't beat a GLEANER in grain, beans, corn or fine seeds. Ask Dave Myers sometime—he's diversified, too!"

"Guess that's right, Joe. I've watched him switch headers on his—nothing to it."

"He's a true GLEANER man," Joe said. "As you probably know, Dave has gone to narrow-row corn this season, like so many others are doing. We are all set with new corn heads on 30-inch centers—in addition to regular widths, of course."

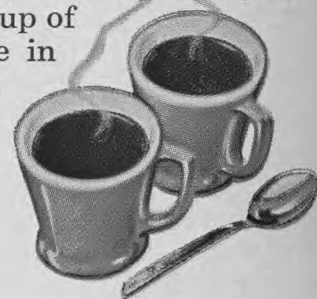
Bill said, "I've been thinking about a cab . . ."

"We can have one installed at the factory, Bill—right on the same order."

Bill looked thoughtful. "Well, I want to talk it over a little more with Helen, Joe—she is sort of the treasurer of our family, you know."

They both stood up. Joe said, "Speaking of lady financial experts, Miss McElroy, our bookkeeper, brews a great cup of coffee. Join me in a cup?"

Bill grinned. "Thanks, Joe, I would enjoy a cup about now."



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GLEANER AII in wheat, pick-up header



GLEANER E, 2-row corn head—headers 10 to 13 feet



HATCH MORE POWER!

(and save fuel)



Chances are that the tough winter has left power-strangling, fuel-eating deposits on your spark plugs. Here's what engineers recommend to regain 11.2% more horsepower and the 13.3% better gas economy which they found to be the loss in hundreds of tractors in recent tests.

In arriving at the figures of 11.2 per cent loss in horsepower and 13.3 per cent loss in gasoline economy, the engineers made the following tune-up operations:

- | | |
|------------------------|------------------------|
| 1. Adjust carburetor | 4. Service air cleaner |
| 2. Set timing | 5. Adjust governor |
| 3. Replace spark plugs | |

In some cases, points and condenser were also replaced. Of these five operations, spark plug replacement pays the biggest returns when a tune-up is needed.

When To Tune-Up? Experts recommend a six month plug change. It can mean an increase of 6.7% more power—and can cut running costs by 8¢ in every gas dollar. It's just plain uneconomical to try to 'stretch' plug life.

You don't need costly power and fuel wastage — you need new Champion Spark Plugs to hatch new power!



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COUNTRY GUIDE

THE FARM MAGAZINE

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GWEN LESLIE

JUNE 1965

We always thought ranching was an occupation reserved for the hardy souls in the western prairies and the mountains of British Columbia. But not so. Peter Lewington found ranchers on the very shores of the Atlantic and tells of one of them in Rancher on the Marsh on page 23. In an accompanying article he tells how this came about through the reclamation of the Maritime Marshlands.

Corn has been established as the key to cheap feedlot gains in Ontario. Now it is moving west. On page 20 Don Baron tells of a Manitoba feedlot operator who is using corn silage as the basis of a program that gives him gains for 18 cents per pound.

Specialization is the word today. On page 18 Cliff Faulkner describes a hog operation so specialized that the owner uses no home-grown feed. Instead he rents his land out to a neighbor and buys all his feed. However, there is always the exception. In the Poultry Department you can read about a poultryman who breeds chickens, sells chicks and operates a laying flock, all on the same farm.

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About Our Cover

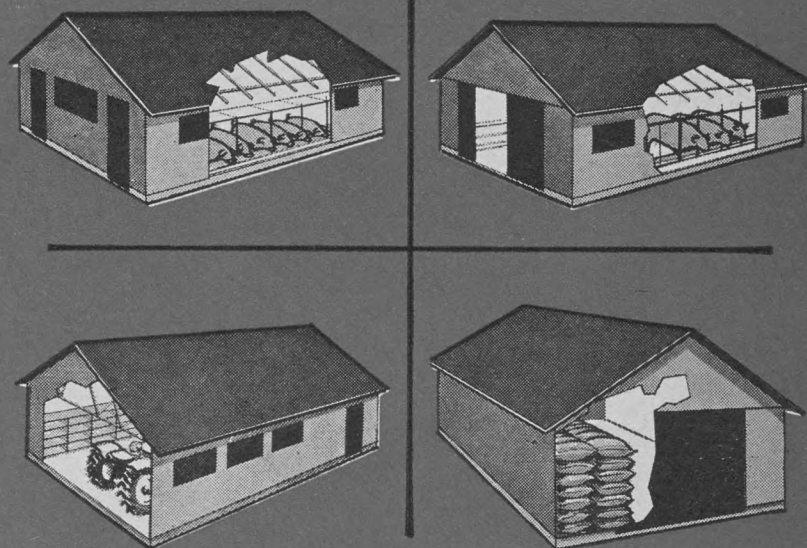
Here is another view of the farm activity pictured on our cover this month. It shows anhydrous ammonia, a cheap source of nitrogen, being applied to a stand of corn.—Peter Lewington photo.

President: A. M. RUNCIMAN
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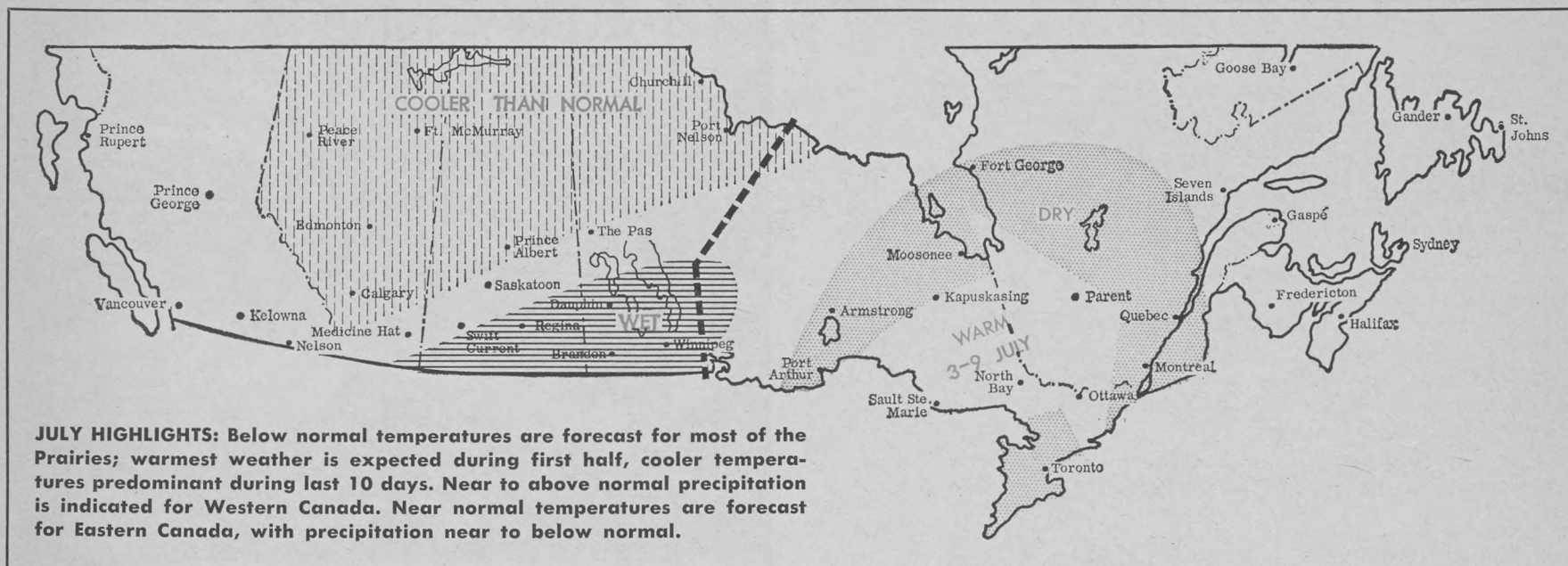
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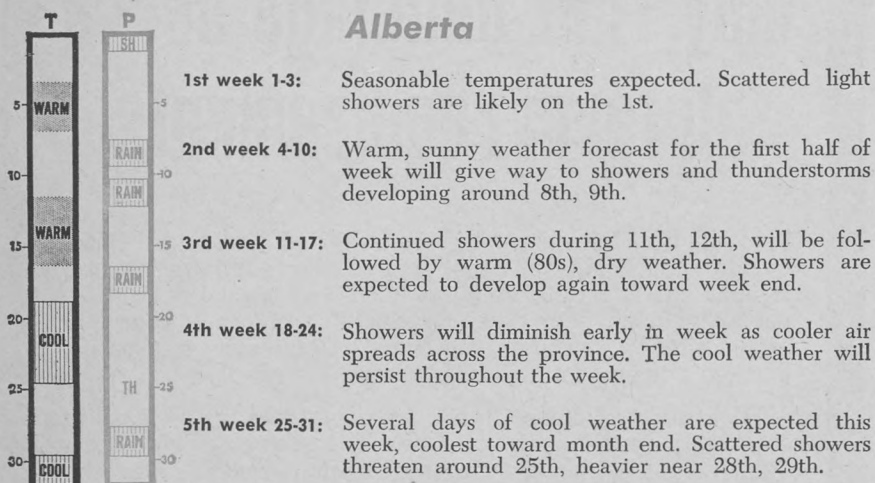
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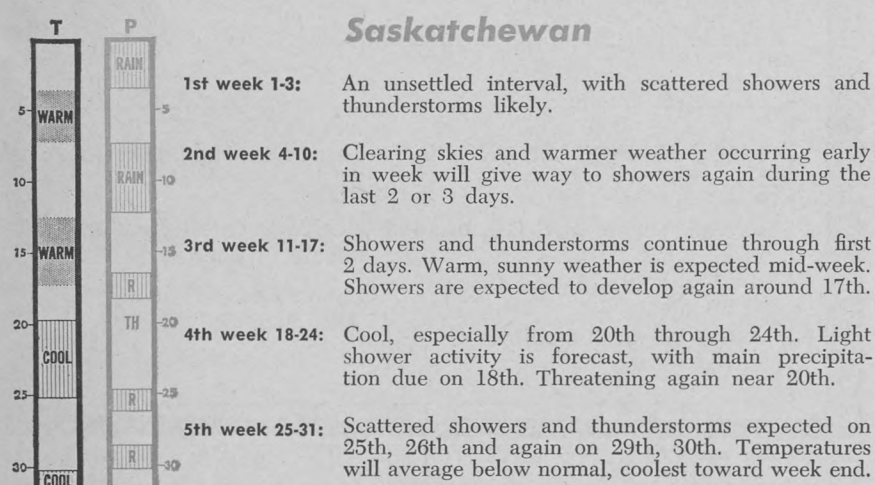
JULY 1965

(Allow a day or two either way in using this forecast. It should be 75 per cent right for your area, but not necessarily for your farm.—Ed.)

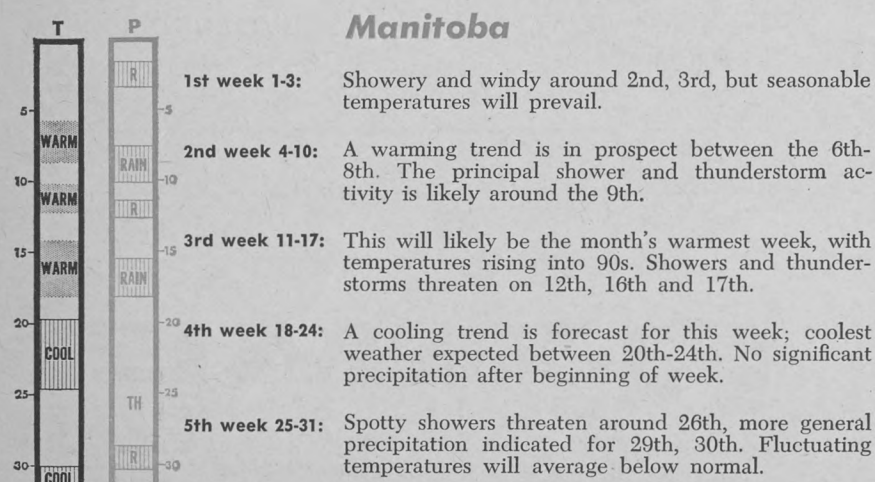
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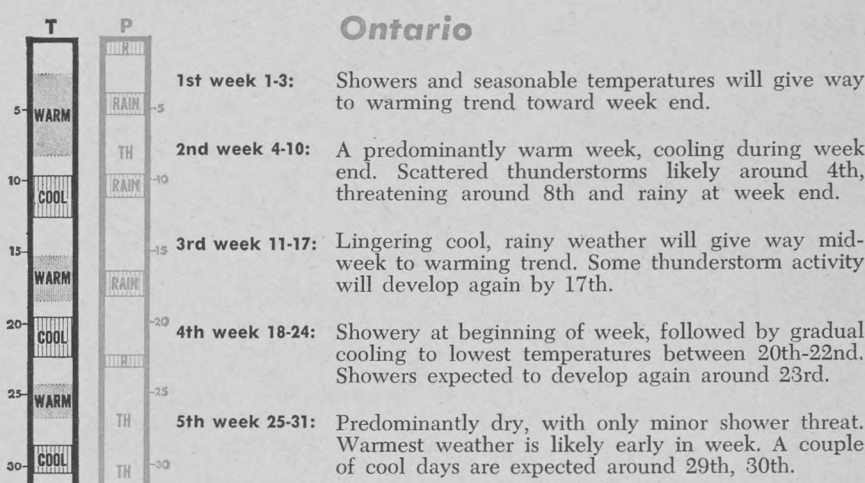
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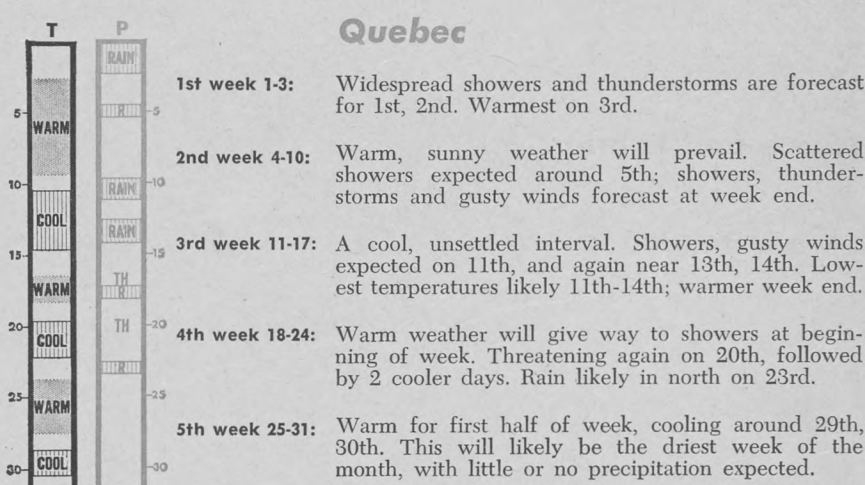
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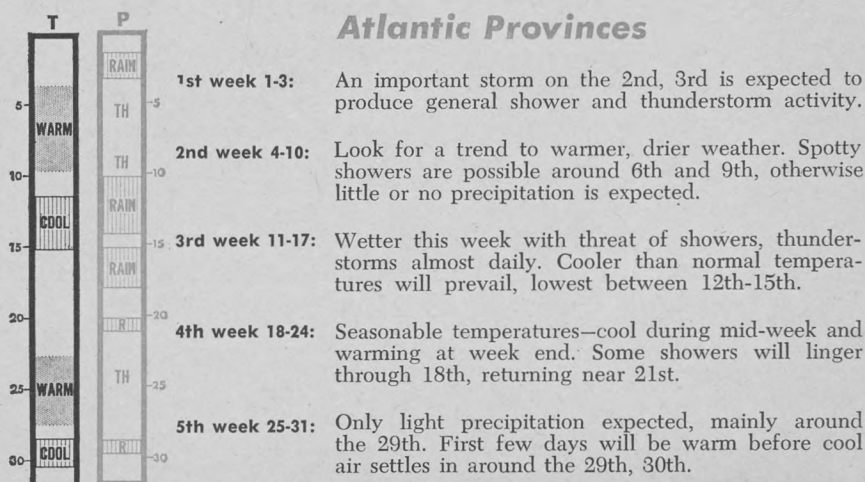
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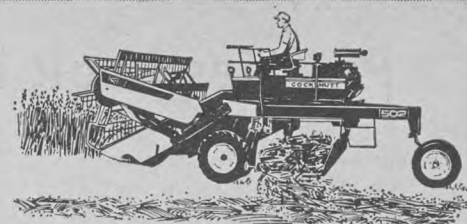


Atlantic Provinces



Key to Abbreviations: T, temperature; P, precipitation; CL, cooler; WM, warmer; TH, threatening; SH, showers; R-S, rain or snow.

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or windrow,
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*With double swath attachment, 502
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Prairies Look to Livestock

SEVERAL FARM LEADERS in the prairies have voiced strong concern in recent weeks about the Federal Government's proposed feed grain policy. Murmurings were heard when the Agriculture Committee of the House of Commons tabled a report recommending the establishment of a feed grain agency under federal statute to administer feed grain policy for the benefit of feeders in Eastern Canada and British Columbia. This agency would have the authority to buy, transport, store and sell feed grain. Then, when the Speech from the Throne referred to legislation to improve the movement and marketing of grain in these areas, Manitoba's Minister of Agriculture, Honorable George Hutton, and other farm spokesmen too, began to express alarm.

Their apprehension centered on how far this feed grain policy might go. Prairie spokesmen have expressed their full support for any action Eastern or British Columbia farmers might take to streamline their livestock programs. Western members of Canadian Federation of Agriculture endorsed that body's policy which calls for a feed grain agency, to be set up to look after Eastern and B.C. interests. However, the concern of Mr. Hutton is that the new federal policy might provide further benefits to Eastern and B.C. livestock producers at the expense of the prairie livestock industry. If, for instance, the proposed agency is not self-supporting as is the Canadian Wheat Board, but relies on government financial assistance, this would in effect be a subsidy to these regions. Or, if it were in a position to exert political pressure on the Wheat Board to see that feed grains were made available at lower prices, this again would give an unfair advantage to livestock men outside the prairie area.

Just exactly what steps the government in Ottawa intends to take regarding feed grains is not yet known but it is apparent that the prairies will resist vigorously any Federal policy which will act to the disadvantage of prairie livestock men.

The cause for concern in the prairies is a long-standing one that is becoming more acute.

Despite the present prosperous times, some areas there are having a grim fight to expand their economies at a similar pace to those of the industrialized and heavily populated provinces. They suspect that feed freight assistance may be working against them.

Feed freight assistance originated as a wartime measure to assist farmers outside the prairie region to get sufficient feed grain to permit them to meet wartime needs for meat and poultry products. It has been continued although the original need has passed. Further, it has been supplemented by feed grain storage assistance and by provisional pricing.

Livestock men in the prairies have frequently pointed out the hurdle this creates for them. The taxpayer foots the bill to ship feed grain down east for cattle and hog producers there. Meanwhile Western farmers who feed their own grain to their own livestock get no subsidy for their grain. Also, they must sell their livestock at a price reflecting their great distance from the eastern market. Their concern has increased in recent months, with the news that the Quebec government, in a bid to further boost its swine industry, is paying a \$3 subsidy on Grade A hogs (up to a maximum of 100 per farm) and is paying livestock transportation subsidies as well.

Governments as well as livestock men are concerned. The aim of all three prairie provinces is rapid development of their resources. Their farmers can grow grain and forage crops

as efficiently as anyone in the country, and are becoming skilled at handling cattle and hogs. A pronounced trend is under way to a more intensive kind of agriculture in which farmers are using more fertilizer, working the land a little harder, and building livestock enterprises.

This could well represent the next major step in the development of agriculture in suitable parts of the prairies. The addition of livestock enterprises to many prairie farms will be a stepping stone to greater prosperity, will help to hold the younger generation on the farm, and will help to increase the overall efficiency and stability of prairie agriculture itself.

The Implications of Farm Efficiency

AS FARM PEOPLE across Canada adjust their individual farm enterprises to make them more efficient, the resulting patterns of change in various communities often differ greatly. For instance, the most pronounced trend in Saskatchewan today sees farmers expanding their acreages with the result that communities become depopulated and local business centers wither away.

Speaking in Winnipeg recently, D. T. McFarlane, acting Agriculture Minister of Saskatchewan, pointed out that farm numbers in his province have been declining at the rate of around 2,000 a year. The loss was about 40,000 during the last 20 years. Individual farmers with larger and more specialized equipment can now handle 1,000 to 1,500 cultivated acres without any difficulty, he said. Putting this in terms of tomorrow's farming, he estimated that if all farmers handled 1,500 cultivated acres each there would be less than 30,000 farms remaining in Saskatchewan of the 80,000 in existence today. Whether Mr. McFarlane's prediction will be fulfilled, and Saskatchewan's farm areas will in fact become as severely depopulated as he expects, remains to be seen.

However, in these days of rapid change other modifying trends can also set in.

One Manitoba community provides an illustration of what can happen. The area around Rosenort, Man., 30 miles southwest of Winnipeg, has had a quiet revolution of its own. Farmers have expanded and become more specialized. The result has been not depopulation of the area but rather an increasing farm population. Young people in that community have decided to stay at home on the farm. They have done it by taking smaller parcels of land and specializing in hogs and poultry.

The town itself has grown rapidly in the last 5 years. The local credit union, which has provided much of the money for expansion, has outgrown its original building in 5 years and is now moving into a new and larger one. A new feed mill has been built in the town. Supply firms have moved in. Lumber and building firms have been set up. New farm machinery agents have come in.

Developments in poultry, particularly, have been dramatic. In the past 5 years 25 to 30 or more farmers have added poultry enterprises—flocks numbering from several thousand up to 20,000 or more hens per farm. But they are all farm flocks.

Inherent in this development have been the efforts of egg buyers. With the farmers pro-

The prairies cannot accept any further loss of the natural advantages that are theirs when it comes to livestock production. A balanced national growth in Canada, and therefore the welfare of the entire country, demands this.

Despite the legitimate concern of prairie livestock men about current developments, it is well to keep in mind that the fastest growing and most prosperous livestock areas in this country are ones where feed, grown in the area, can be fed to livestock. In Eastern Canada, this is southwestern Ontario where the basis of the feeding program is home-grown feeds rather than prairie grains. In the prairies too, livestock production is expanding in areas where farmers are growing grain and forage crops themselves and are using this cheap feed and their available labor to develop their hog and beef and poultry enterprises. There seems no reason at the present time for farmers in areas where they can produce their own feed to advantage, to fear that they are going to be shoved out of the livestock business.

ducing a steady supply of high quality eggs, retailers and wholesalers of eggs can operate more efficiently, picking up a large volume of eggs in the one community. As a result they have begun to pass on the benefits of efficiency to the producers. They are now purchasing eggs unwashed and ungraded and yet are paying growers prices that come within a cent or two of spot prices for graded eggs in Winnipeg. In other words the old 7- or 8-cent margin, which at one time was taken by egg grading stations to handle the eggs, has been largely passed back to the producer. The gap between producer and retail prices has been vastly narrowed.

In discussing this development, Manitoba's Poultry Commissioner Ross Cameron says producers are doing such an efficient job that it is doubtful if retailers could set up their own flocks and produce eggs as cheaply using all of the techniques of mass production that are known. As a result, he says that although some retail chain stores are now moving into the production field to assure themselves of an adequate supply of high quality eggs, there is little doubt that producers such as those around Rosenort will be assured of a market as long as they continue to do the job.

Trying to peer into the future of an industry which changes as rapidly as the poultry industry is a risky business at best. But Cameron is confident that developments of the next few years should present no insurmountable problems to the Rosenort producers.

He says that the egg industry is now moving into a period of more effective and intensive selling. Retailers, he points out, are taking steps to assure themselves of high quality eggs. They are beginning to sell eggs by brand. Cameron predicts that this emphasis on sales will finally bring a halt to the continuing decline in per capita egg consumption. In fact, he points out that in 1964 consumption held steady with what it had been in 1963, at 21½ dozen eggs per capita.

He predicts that there will be more industry-wide planning with possibly a move toward marketing boards or commissions. Marketing, he predicts, will be the key to the future. Producers who want to continue in the egg business will have to assure themselves of a market.

Around Rosenort, developments in farming are working strongly to the benefit of the local farm community rather than to its detriment. Who will say that such developments will not also take place in parts of Saskatchewan and in other areas too?

Tomorrow's Food Industry

IS THE PROBLEM of the food industry one of adapting to change, or is it something else altogether? Dr. J. M. Nesbitt, head of the University of Manitoba's Dairy Science Department, and Arnold Platt, executive secretary, United Farmers of Alberta, argued the matter at a consumer-marketer conference in Saskatoon recently, and failed to agree.

In his address, "Foods of the Future," Dr. Nesbitt stated that the major problem facing the food industry is how to cope with change. Platt argued instead that it was an economic problem. "Government policy," he said, "declares that we shall have cheap food. This is a problem to producers." When Dr. Nesbitt added that producer problems included displacement ("... a great many of our farmers today are not needed to produce the food we need ...") and effective production ("... a pressure to bigness ..."), Mr. Platt replied that bigger farms couldn't solve the problems created by a cheap food policy. "We have figures on big producers who show very small profits."

Dr. Nesbitt pointed out that technological change had taken place rapidly in farming; the industrial revolution and the mechanization it involved had been compressed into a much shorter time on farms than in industry itself.

Among the technological changes affecting the food field, he listed:

Chemistry — the tools for weed and insect control; analysis of flavor compounds; the plastics for packaging.

Physics — peacetime uses for nuclear power and radiation; ultrasonics for cleaning and separating the constituents of grass, inedible to humans in original form, to salvage protein.

Plant Science — species development and selection for higher yields (increasing rather than reducing a producer problem of producing more than is needed to meet the effective market demand).

Animal Science — specific pathogen-free hogs; the possibility of producing up to 12 calves per year from a good cow by transplanting fertilized ovum to a poorer cow to carry; to a limited extent, can now control sex of animals.

Engineering — techniques of automation permit faster use of more information to make better decisions; replacement of men's backs with machines.

An Age of Science

As Dr. Nesbitt explained, we live in an age of science. The practical application of scientific advances changes our society. We need fewer calories than we used to require; for health we must eat less. When people eat less, it becomes even more important to select foods which supply the needed nutrients. This affects food marketing, and so does increased income. With more money to spend, people buy more fruits and vegetables, more meat, poultry and eggs, more dairy products. They buy less cereal foods and potatoes. They buy more convenience foods.

So, although the growing Canadian population presents a larger

total food market, the foods in demand change. The farmer, according to Dr. Nesbitt, will have to pay more attention to what happens to his products after they leave the farm. He will have to pay more attention to what products the housewives are buying. He will have to be more adaptable and be ready to switch to those products in demand.

In food processing, Dr. Nesbitt foresees more concentration of food products (removal of water); more sterilization (to extend keeping qualities); more freeze-drying (products are lighter and more compact for storage and shipping). Much of our egg production, he feels, will be sold as melange (shelled eggs). Eggs sold

in the whole state will appear on the market in clear-plastic, hermetically sealed containers untouched by human hand. In the field of poultry meat, he anticipates more packaging and selling of pre-cooked prepared meals. More of our other meats will be tenderized, on the hoof or after cooking.

Improve on Original Product

Up until now, the goal of processing has been to preserve food for out-of-season use. Now processors aim for a product that's even better than the original, and considerable work is being done on synthetic food products. Several plants are in operation to produce protein by the action of yeast, using blackstrap molasses, urea, superphosphate and ammonium sulphate as raw materials. The resultant protein can be

consumed directly by humans, or used as feed for livestock.

Dr. Nesbitt spoke next of marketing, another link in the food chain.

Eventually, Dr. Nesbitt suggested, the primary buyer will contract with farmers to assure a continuous supply of high quality produce. This was a good thing for the farmer, he maintained, because it assured the farmer a steady market.

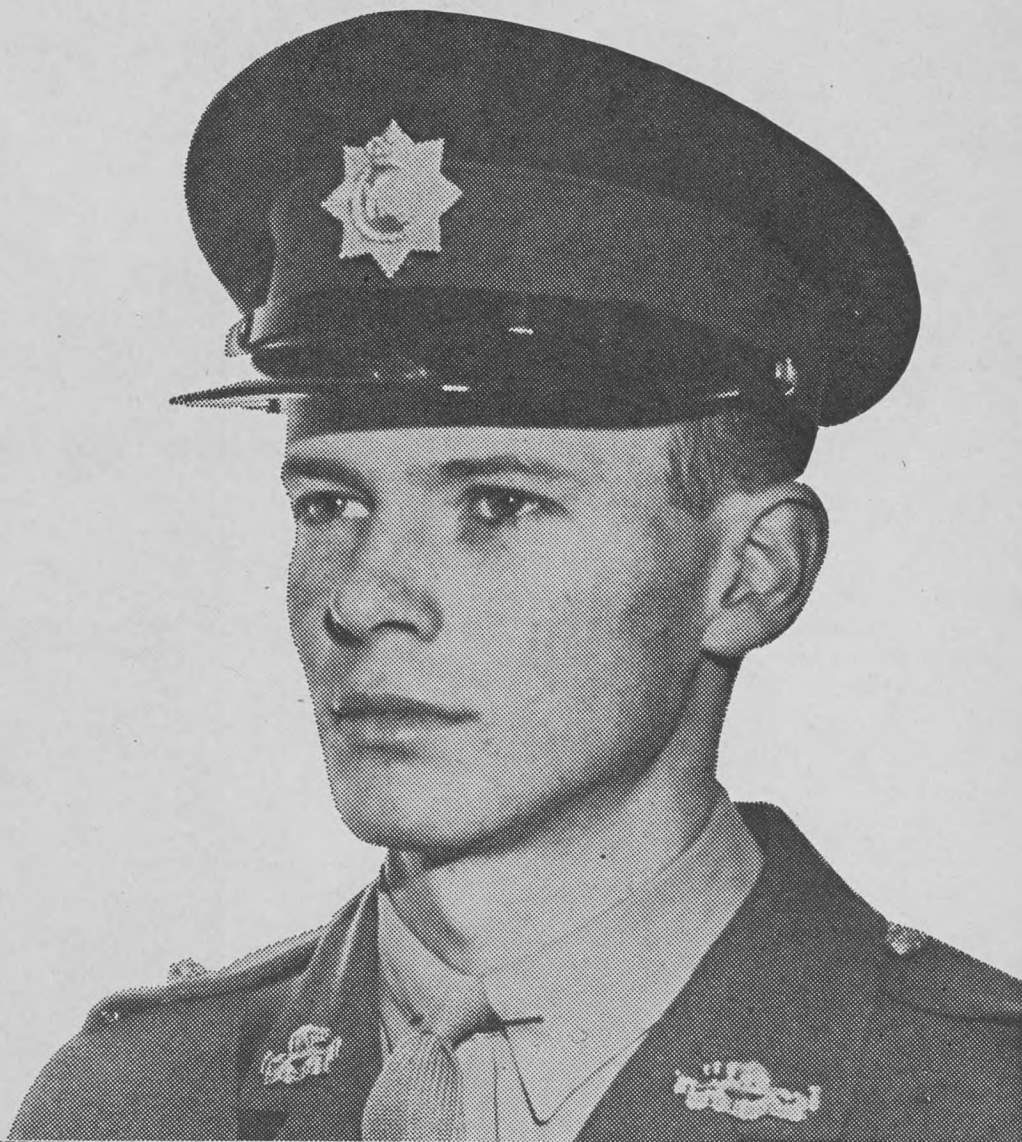
Competition forced many of the changes taking place in the processing, packaging and retailing of foods, Dr. Nesbitt concluded. Perfect competition doesn't work for the farmer, the primary producer. But, he cautioned, under government control changes take place very slowly. Too slowly, perhaps, for the welfare of the food industry. — G. Leslie. V

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GUIDE POSTS

UP-TO-DATE
FARM MARKET
FORECASTS

CANADIAN WHEAT EXPORT aim of 400 million bushels for the 1964-65 season appears to be on target. Added to the domestic use of 150 million, this will leave about 50 million bushels of the 1964 crop to be heaped onto the carry-over stockpile.

WORLD CATTLE NUMBERS last year again increased at a higher than average rate. Over the next few years, the accent for expansion will be in countries outside North America, while North American production is expected to slow down or even decline.

CANADIAN CORN BOOM, centered in Ontario, shows few signs of slowing down. However, since the growing area is spreading to what were once marginal areas, new growers should seek best advice on obtaining maximum output. Price outlook is favorable.

WORLD FEED GRAIN STOCKS are melting away compared with a year ago, reflecting both smaller output and larger livestock herds. Growing conditions in North America this summer will strongly affect future price levels.

HOG PRICE PROSPECTS for this year appear better than last despite larger output. Booming economy at home and increasing export prospects to the U.S. at good prices provide the props.

RATE OF DURUM WHEAT disappearance is running about a third ahead of a year ago, due to our highly competitive price position on world trade. Nevertheless, stocks remain large and, given average yields on even a sharply reduced acreage this season, our supplies will be sufficient to fill market demands.

FLAXSEED PRICES are now entering the seesaw period. However, yields should be fairly stable, since more than half the acreage is in Manitoba, where yields normally fluctuate less than in Saskatchewan.

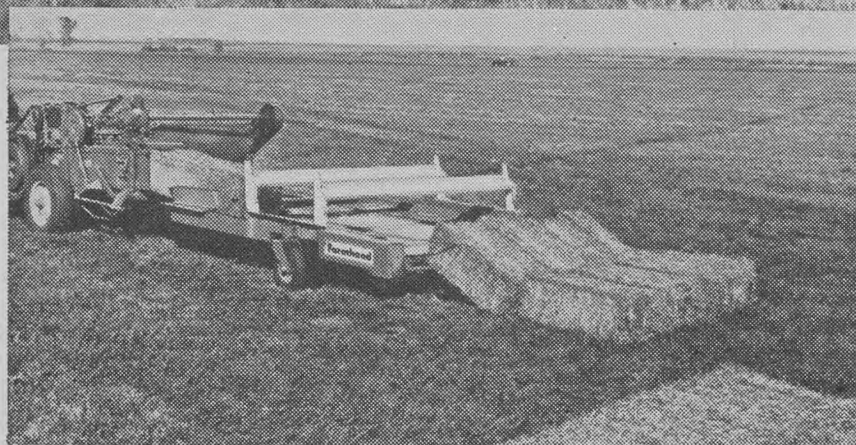
FOOD REQUIREMENTS of under-developed countries as a king-pin of economic growth are receiving extra attention. Recent studies show this need to be far greater than previously believed, and increased imports, either as gifts or for cash, will be necessary.

DAIRY INDUSTRY will show a fine balance this year between total milk output and usage, possibly tipping toward a slight reduction in carryover stocks. Extra production will be largely absorbed by increase in the Canadian population.

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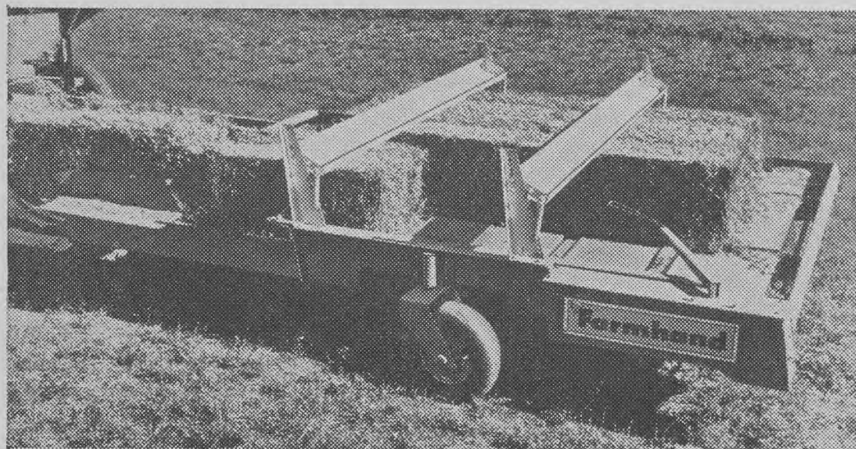
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Complete severance of the wholly owned subsidiary, Ontario Bean Growers' Limited, from the Ontario Bean Growers' Marketing Board, is recommended by Price Waterhouse and Company following a survey of the business affairs of the board conducted at the request of the Ontario Farm Products Marketing Board. The report stated it is essential to have a good relationship between the growers' board and licensed dealers and referred to bitter feelings among dealers toward the growers' company. It said that dealers believed the company represents unfair competition since it is subsidized by the board and has access to privileged information.

Although Saskatchewan hog producers marketed nearly 31 per cent more hogs during the first 3 months of 1965 than during the similar period of 1964, they also improved

quality of the hogs, with over 42 per cent of them grading A.

Permits have been issued to 67 Canadian cattlemen for importing 124 pure blood line cattle from France. Most of the cattle are Charolais. Owners will take delivery next spring.

Because of winter injury to the soft fruit crops in British Columbia, there will be practically no apricot and peach crops harvested in that province this summer and the cherry, prune and Bartlett pear crops will be severely reduced.

The support price for grade A hogs, provided by the Agricultural Stabilization Board, remains the same as last year, at \$23.65 per cwt. The price support applies to a maximum of 100 grade A and B carcasses marketed by individual producers.

As part of its plan to reduce the consumer subsidy on butter from 11¢ to 9¢, the Agricultural Stabilization Board has increased its buying price for butter by 2¢ per lb. to 55¢ per lb. The selling price will increase accordingly.

As part of its cheese price support program, the Agricultural Stabilization Board has increased its purchase price for Canadian cheddar cheese to 35¢ from 32.5¢ per lb. Export assistance increases to 4¢ from 2¢ for cheddar cheese.

A new nematode diagnostic and advisory service has been set up in Ontario for fruit and vegetable growers as well as farmers interested in tobacco and greenhouse production. Under the program, growers will be able to have their soil analyzed for nematodes.

Sugar is now being blamed as a major cause of coronary heart disease. The chairman of the Nutrition Department, University of London, says recent evidence now indicates that men with coronary problems have been eating twice as much sugar as those with no symptoms of heart disease.

A \$16,000 ARDA project to study rough land pasturelands in six Ontario counties has been announced.

Hog producers in Nova Scotia can now get financial assistance from their provincial government if they buy breeding age boars which have been inspected prior to purchase and which are out of high-scoring dams.

A study to determine how grazing lands should be developed in each of the five grazing regions of Alberta is to be undertaken under the sponsorship of ARDA.

Beef continues to gain in popularity at the expense of other red meats. Cattle and calf production in the United States made up 61 per cent of total meat animal output, a gain of 2 per cent over the previous

year. Hog production was 37 per cent, a 1 per cent decrease. Sheep and lamb production was 2 per cent, a 1 per cent decrease.

A scientist from Nottingham University, Britain, says total abandonment of the use of chemicals on the land would lead to a devastating reduction in food production.

The activities of National Farm Radio Forum have been terminated and the Farm Forum Guide will no longer be published.

The severe winter took a heavy toll at the Manyberries range station in southern Alberta, resulting in the loss of 30 cows out of the 500-cow herd.

The Poultry Industry Conference and Exhibition is scheduled for June 15, 16 and 17 at London, Ont.

Plenty of reasons have been put forward for the collapse of FAME Co-operative in hearings now being conducted by the Supreme Court of Ontario. Among the reasons have been lack of information on the part of directors, poor communications between officers and board, inadequate financing, fear of the big meat packing companies and mistrust between various sections of the farm and co-operative movements of Ontario. The enquiry was called by Premier Robarts of Ontario following the failure of FAME to meet payments for the Fearman Company Ltd. meat packing plant at Burlington which it had undertaken to purchase for \$3 million. FAME had made an initial payment of \$1½ million.

Manitoba students considering a career in veterinary medicine can now take the first 2 years of preliminary courses at the University of Manitoba.

Nearly half of Manitoba's farmers who are eligible for crop insurance and who are in areas where it is available have taken coverage this year.

A 6-year-old Ayrshire cow, Selwood Lily, produced 20,012 lb. of

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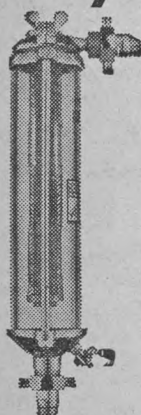
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milk and 870 lb. of butterfat in 375 days to set a new milk record for the breed.

Winner of the first prize 2-ton truck in the Elephant Brand "Best in the West" contest was Cliff Sapsford, of Perdue, Sask.

The president of the Manitoba Farm Bureau, W. S. Forrester, stated, after a meeting of member organizations, "that the representatives attending the meeting had unanimously agreed that the Feed Grain Agency being proposed by the Federal Government could have serious implications for Manitoba farmers if it attempts to lower the price of feed grain for Eastern Canadian producers."

The Meat Industry Co-ordinating Committee in Alberta has raised \$3,000 to support a study of hog pricing and marketing practices in the province. The study, to be made by the Agricultural Economics Department of the University of Alberta, will include the buying of hogs in terminal markets as well as the direct buying activities of packers. It will deal with competitive buying and selling practices at various stages from producers to consumers.

The Centennial Commission has given \$15,000 to the Canadian Council on 4-H Clubs to be used in 4-H Travel and Exchange Programs.

An electronic egg-grading system which mechanically grades and

washes eggs at the rate of 10,000 per hour and checks them for blood spots is being installed by Manitoba Dairy and Poultry Co-operative Limited.

Farmers will be second only to wage earners and will have priority over the banks in claims against food processors who enter into bankruptcy proceedings, if legislation amending the Bank Act, which has been introduced by the Federal Government, is passed.

The job facing the Agricultural Economics Research Council, says its chairman, James Clarke, is to lead the nation out of its indecision and uncertainty in the agricultural policy field. He stated that Canada's present farm policy, in common with that in many nations of the Western world, is marked by confusion and contradiction and the reason for this is our inability to clarify and co-ordinate our objectives. He said results of some of the research projects carried out by the council can be expected by the end of 1965 or early in 1966.

The tariff board has recommended that the duty on live turkeys be increased from 2¢ per lb. to 10 per cent but not less than 3¢ per lb.

China has purchased another 58.7 million bushels of wheat, mostly in the lower grades, from Canada, bringing to 164 million bushels the amount purchased under the Second Long-Term Wheat Agreement between the two countries.

LIVESTOCK SHOWCASE AT OTTAWA

As a step to boost Canada's exports of high quality purebred dairy cattle, the Canada Department of Agriculture has purchased 10 dairy cows of each of the four main breeds — Holstein, Ayrshire, Jersey, and Guernsey, and set them up as herds at the Central Experimental Farm. Explained Agriculture Minister Harry Hays, "We get a great many people from other countries passing through Ottawa. Many of them are in a hurry, but if we can just get them to take a few minutes off to drop into the Experimental Farm, we can now show them just what we have to offer." Cost of purchasing the 40 head was \$31,725. The cattle were nominated by and purchased through the four national breed associations.

FUNCTIONS OF NATIONAL DAIRY BOARD

The Dairy Farmers of Canada have outlined the functions which they believe should be carried out by the proposed National Dairy Board. A few of them are as follows:

- Administering the price support program and the exports and imports of dairy products.
- Licensing dairy establishments in co-operation with provincial authorities.
- Imposition of marketing quotas or supply planning when necessary.
- Control of inter-provincial shipments by directing the flow of fluid milk as may be required in border situations.
- Providing funds to carry on

market research, particularly for increasing the efficiency of the marketing structure.

- Providing funds for the development of information on supply and demand, product improvement and costs of production, processing and distribution.

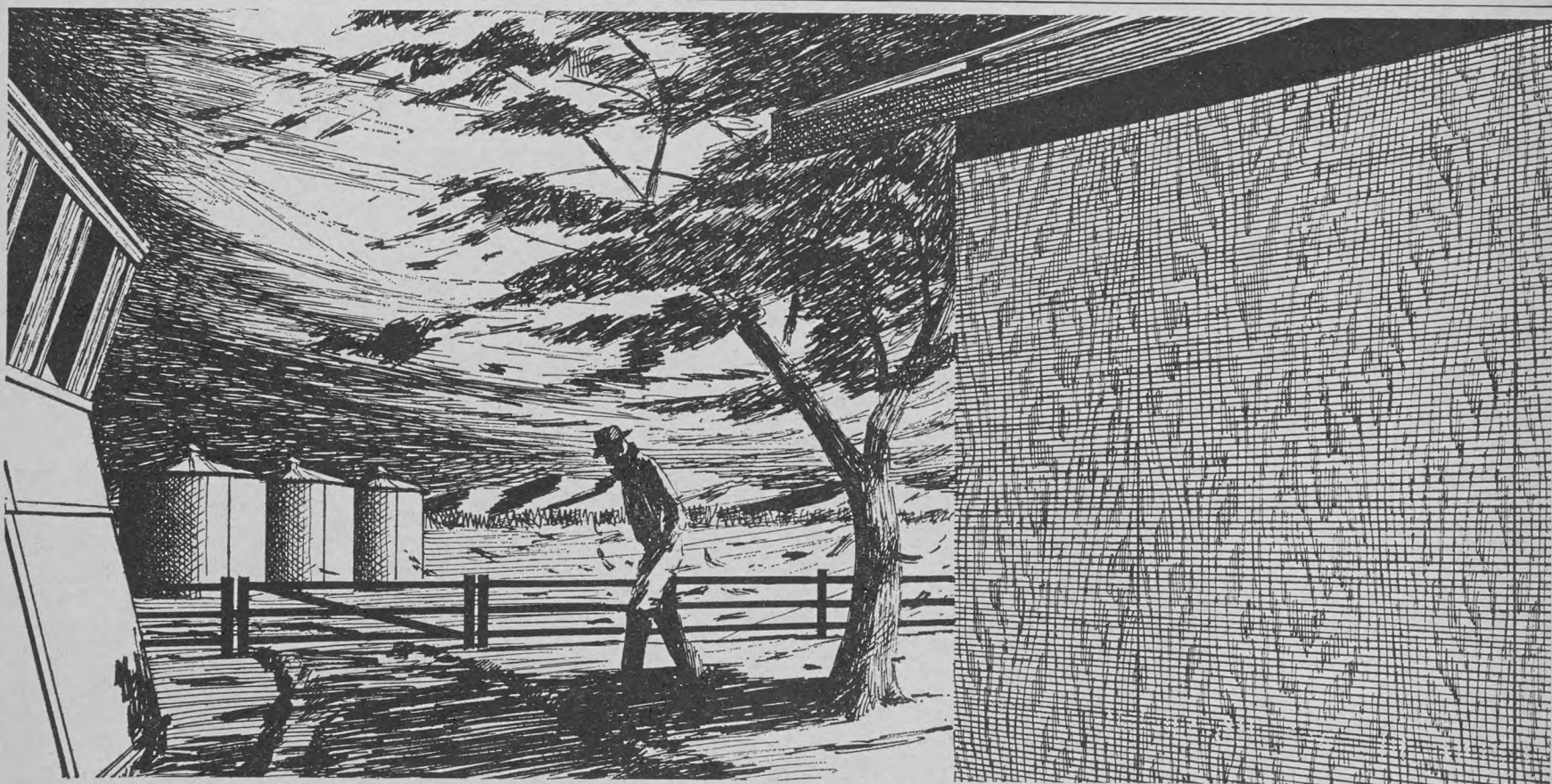
- Work with provincial authorities to set up minimum quality standards for milk and dairy products entering provincial and inter-provincial trade.

- Work with provincial governments to develop an effective national dairy policy.

MILK POOL FOR ONTARIO

Under Ontario's proposed new Milk Act, a three-man commission, with a civil servant as chairman, will supervise the \$330 million a year dairy industry in the province. It will have powers of licensing, price setting, and regulation of marketing, processing, transportation, distribution, and control of quality. The new commission will be responsible to the Minister of Agriculture. The present quota system will disappear and no special financial compensation will be provided. The Cream Producers' Marketing Plan and the Cheese Producers' Marketing Plan will be allowed to continue. Under the plan, advisory committees, providing a common meeting ground for processors, distributors, producers, and truckers, will be established. No one will be refused the right to produce milk. Dis-

(Please turn to page 53)



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Challenge Feeding

by **ROGER FRY**

Field Editor

JOHN HOLTMAN of Rosser, Man., couldn't get a steady supply of good quality hay so he started feeding his purebred Holsteins a high grain ration. Now heavy grain feeding is a regular feature of his management program. His dry cows get up to 25 lb. of grain per day just before calving and top producers are fed 40 lb. of grain during the peak of their lactation.

Average production in the Holtman herd has risen from 13,000 lb. to 15,000 lb. per lactation.

The experts call this "conditioning and lead feeding." Dr. J. B. Williams of the University of Minnesota described it to Manitoba dairymen at their annual meeting this past winter.

Conditioning begins a month to 6 weeks before calving. You start by feeding the dry cow 4 to 6 lb. of grain per day and gradually increase to 15 to 20 lb. You aim to have the cow in maximum physical condition on the day that she calves and the bacteria in her rumen adjusted to a high grain ration. "Experiments showed that this adjustment takes 2 or 3 weeks," says Dr. Williams.

Lead feeding starts immediately after calving. You feed 30 to 40 lb. of grain per day until milk production begins to drop and then gradually reduce the grain.

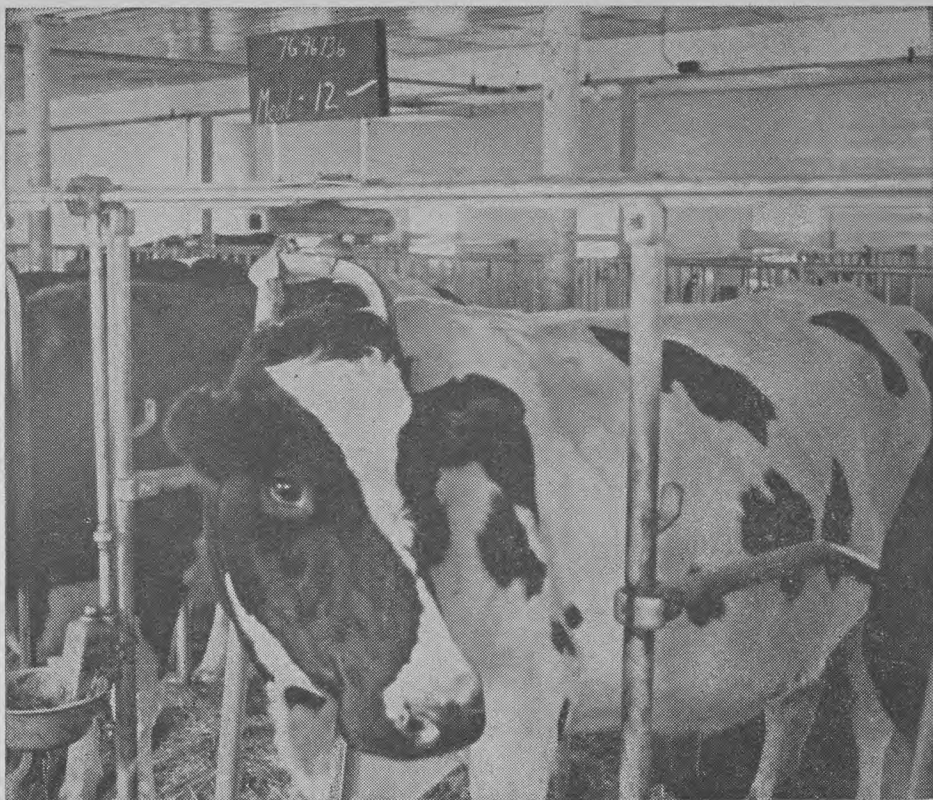
Top cows will reach the limits of their producing ability and also hold up their production longer. They will produce 1,000 to 2,000 pounds more milk per lactation.

CONDITIONS AND LEADS

On the Holtman farm, dry cows are started on 4 to 5 lb. of grain 6 weeks before calving. This is increased gradually to reach 20 lb. per day a week before freshening; top producers get 20 to 25 lb. Feed intake drops to half this at calving and takes a week or 10 days to recover. By then, the heaviest producers are getting 30 to 40 lb. of grain and those giving 80 lb. of milk per day, 25 lb. of grain. Each cow also gets 15 to 20 lb. of silage and 10 to 15 lb. of hay.

The herdsman, Bill Baas, gauges the amount of feed each cow gets by her production and condition. As production drops off, he feeds less. "They don't eat as much when they are milking less," says Bill.

The grain mix is: 2,000 lb. oats, 400 lb. corn, 100 lb. soybean, 6 lb. urea, vitamins and minerals. Corn is included for energy. "The oats are heavy, about 40 lb. per bushel. There is some wheat and barley mixed in them," says John Holtman.



Her grain ration was already 12 lb. per day but before she calved it was up to 16 lb. [Guide photos

John feels that he is overdoing the grain feeding, but he will not cut back unless he can get good quality hay. "By quality, I mean energy content," he says. "I can go on feeding a high level of grain as long as I have a herdsman like Bill who knows each cow."

The University of Manitoba also practices both conditioning and lead feeding. Here, dry cows get 10 lb. of grain 2 weeks before calving and 25 lb. by calving. After calving, the amount of grain goes up according to milk production. A cow producing 80 lb. of milk per day gets 40 lb. of grain and cows producing above this level get all the grain they will eat.

When production levels off, the grain ration is held steady. When production drops, the grain ration is reduced every 2 weeks. "This adjustment following a drop in production results in some overfeeding," says Dr. Marvin Seale of the Animal Science Department at the university. "However, this may be good insurance against the variations in roughage quality."

Is this much grain necessary?

"Most dairymen do not feed enough to meet the energy requirements of their cattle," says Dr. Seale. "This is particularly true if you consider the variations in quality of the roughage that these cattle are getting."

In his talk to Manitoba dairymen, Dr. Williams also referred to the problem of getting enough energy into high producing cows. "It takes a cow 5 hours to eat 40 lb. of silage and 20 lb. of hay but she can clean up 1 lb. of grain in 3 minutes. She may even eat it faster in the milking parlor or if it is mixed with water at the rate of 1½ lb. of water to 1 lb. of grain."

"The modern dairy cow has been bred to produce huge quantities of milk but she cannot do it if we do not provide her with enough energy," says John Holtman.

CONDITIONING ONLY

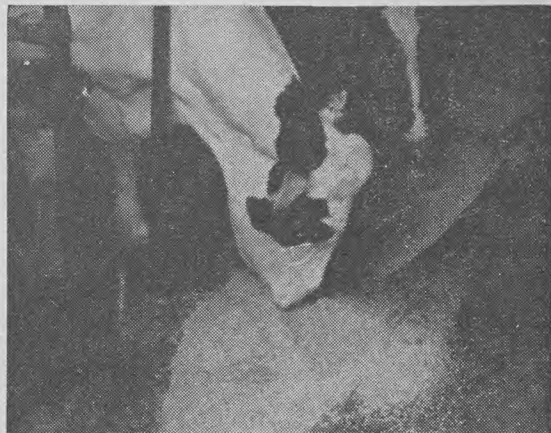
The dairy herd at the Selkirk Hospital for Mental Diseases has been on the conditioning part of this feeding method for less than a year. Ray Chandler, manager of Manitoba Institutional Farms and Charlie Harper, farm foreman at the Selkirk farm, are enthusiastic about it.

Dry cows get 4 lb. of rolled oats per day starting 6 weeks before calving. This is steadily increased until at 4 weeks they are getting 10 to 12 lb. per day. During the last week before calving, the cows are fed 14 lb. of grain plus a little bran as a laxative.

"We try to make every change in management a gradual change," (Please turn to page 54)



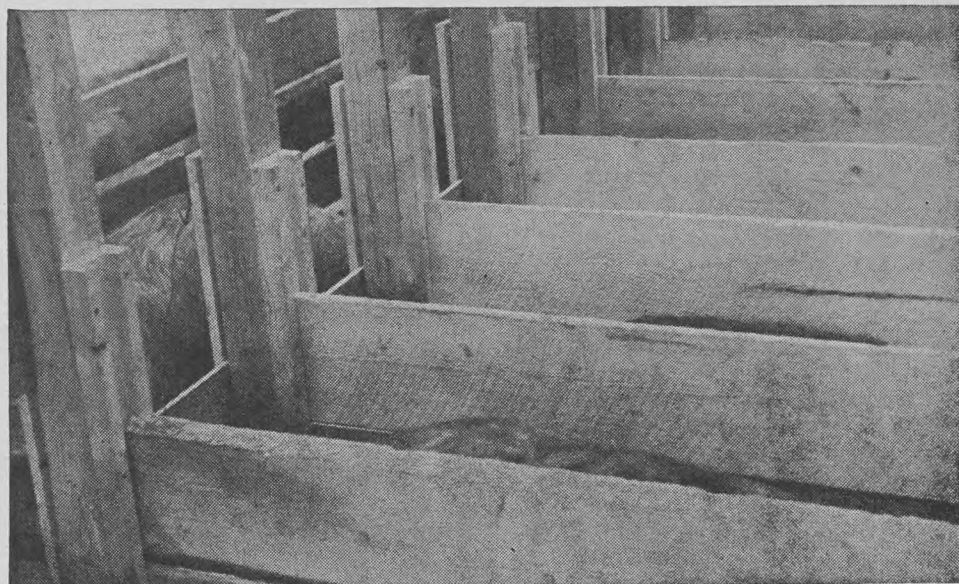
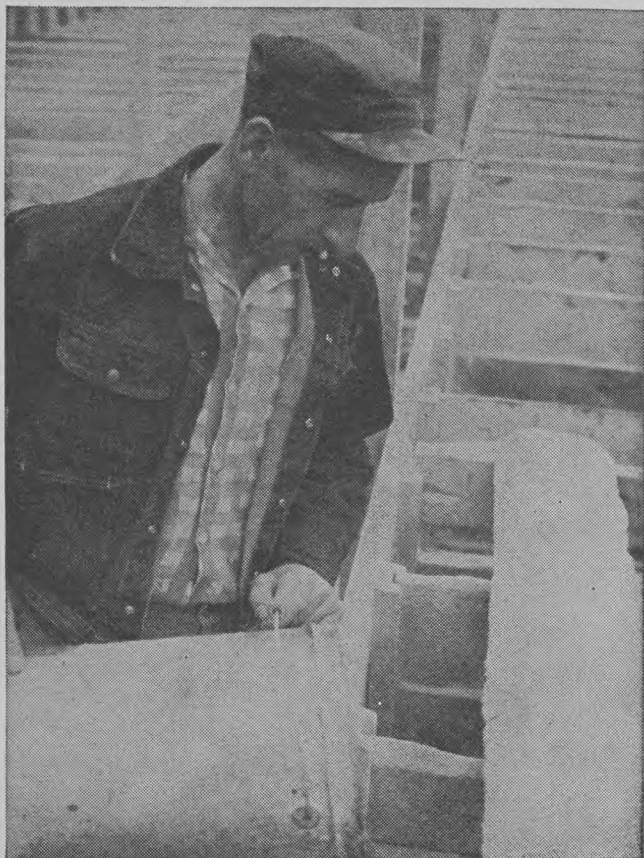
A dry cow in Holtman's barn. The dry cows in this loose box get a ration like this each feeding time



An average grain feeding. She has to clean up as much twice a day to keep up her energy demands



Bill Baas, herdsman at the Holtman farm, empties feed cart 4 times a day, feeding the milking herd



LEFT: John Oudman shows how hand feeding is done. ABOVE: Gates in closed position [Guide photos]

3,000 Weaner Pigs a Year

This hogman built a farrowing unit that converts to handle weaner pigs. Breeding stock is fed in a separate building with individual stalls

by CLIFF FAULKNER
Field Editor

IT IS NATURAL for you to be interested when a neighbor builds a new barn, but you should be interested enough to come calling in a new pair of overshoes. Not long ago, a big hog farmer in the United States completed a new barn. His neighbors flocked to see it, many wearing the same clothes and overshoes they wore in their own operations. Within a year the new herd was so disease riddled it had to be shut down.

This is why most stockmen prefer visitors who

have come from far away. If a man has to travel some distance he is less likely to be wearing his working clothes. It is also the reason extra overshoes and chemical foot baths have become almost standard equipment on modern hog farms. The garbage collector who feeds hogs as a sideline, and the farmer who goes out to "slop the pigs," are giving way to the specialist who feeds a balanced ration and knows the dollar value of rigid sanitation.

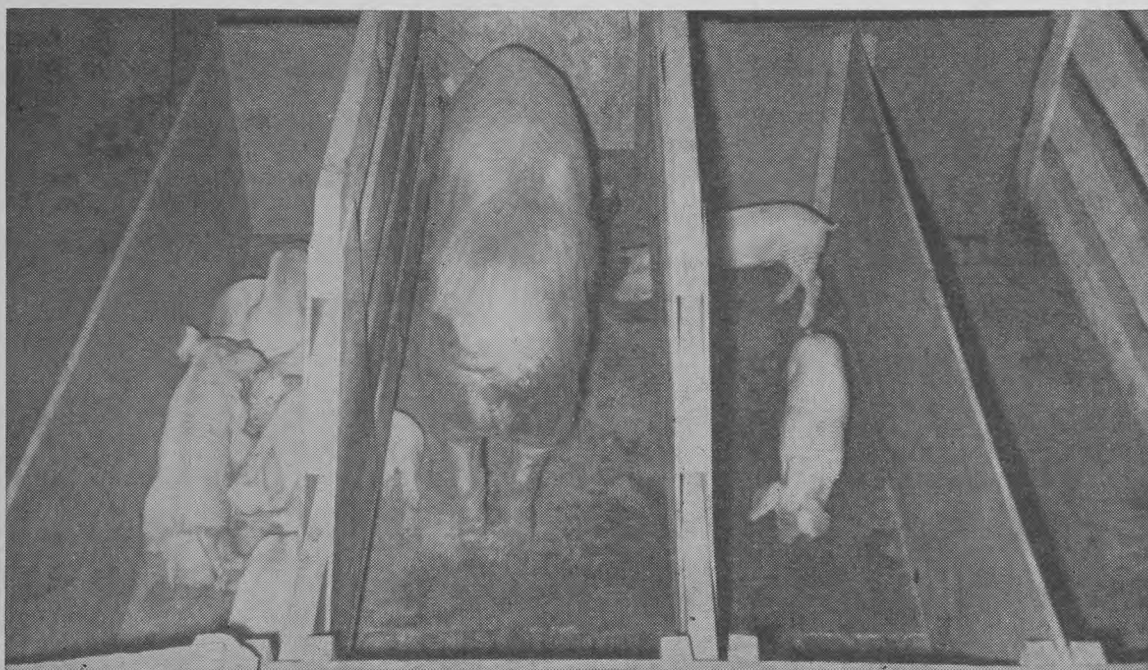
When most people buy a new farm they look for a place with level land — most of it cleared — and a fine set of buildings. Two years ago, when John Oudman was looking for a site for his hog enterprise, he chose a quarter section with sloping land, 60 acres of trees and no buildings. The location — about 5 miles southeast of Lacombe, Alta.

"I didn't want to inherit somebody else's troubles, or make any unnecessary trouble for myself," said John. "I wanted a farm that had had no pigs on it for many years — that had sloping land for good drainage and plenty of trees for shelter. I also wanted buildings that were made for the job so I could handle a lot of animals with as little labor as possible."

John and his wife, Anne, run a specialized weaner enterprise which produces over 3,000 weaner pigs a year. They obtained their breeding herd of 200 sows and 15 boars from Sten Berg's "Highbred" line at Ardrossan, Alta. Berg's Breeding and Management Service also designed the Oudman farrowing barn and a 60-place outdoor feeder.

While they were getting started, the Oudmans wintered their bred gilts in low sheds made of straw bales. These shelters are still in use today. When hog specialists from the Saskatchewan Department of Agriculture visited the place in December 1963 the temperature stood at 25 degrees F. below zero, yet the animals appeared to be comfortable and looked thrifty. Last December — the most severe on record — told the same story.

The main unit at the Oudman farm is a 36 ft. by 112 ft. plywood farrowing barn which has 78 farrowing pens. It has two batteries of pens



The sides of the farrowing pens are removable; weaned pigs can be left in the pen when sows are removed

separated by a central alley with two rows of pens per battery. Alleys are also located along each wall. Pen floors are heated by plastic hot water pipes buried in the concrete, and additional heat comes from two suspended hot water space heaters. All pen sides are removable for conversion to weaner pens when needed.

In winter, fresh air is drawn down from the loft through slits along the edges of the ceiling and foul air is exhausted by two variable-speed fans in the east wall. If the weather is very cold only one fan is turned on. Summer ventilation is provided by vents under the eaves which run the full length of the west wall. These can be covered completely, or in sections, by hinged flaps which let down inside the building.

Waste removal is through partially slatted floors to rounded V-bottomed gutters which run down the center of each pen battery to a sump at the building's north end. The sump can be drained into the lagoon by removing a plug in the bottom. There are also four shallow gutters which run under the front end of each pen to take care of any spilled drinking water which might wet the pen floors. These drain into the main gutters through a series of small pipes. The front and rear sections of each pen floor slope down to their respective drains. Gutters are flushed into the lagoon every 5 to 7 days. The cost of the material that went into this building was about \$13,000.

SEPARATE FEEDER BUILDING

The concrete-floored feeder consists of a central alley with a row of 30 individual feeding pens on each side. Feed is dumped by hand in the front end of each pen and the pigs enter the pens from alleys in the rear. Once a pig is in a pen, the operator traps it there by releasing a drop gate at the back. The idea here is to confine the animals so that each pig will feed quietly and get its proper share of the ration. But it has not worked out too well in practice.

"Many of the pigs can't adjust to this confinement system," John Oudman said, "some try one pen after another and back out again before I can drop the gate, while others try to climb over the sides. Eventually, most of them will walk in and feed, but a certain number of them won't adjust at all. At first I thought they would go in after missing a meal or two but it hasn't worked out that way."

All the feed used is a prepared ration bought at a local feed mill. John rents his cleared land to his brother-in-law, William Zuidhoff who has a hog feeder operation nearby. The Zuidhoff farm provides a steady market for most of the Oudman weaner pigs.

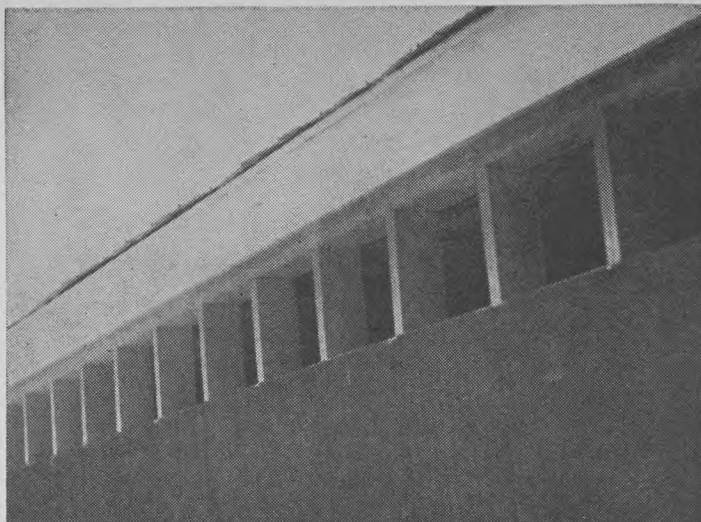
Some hog growers think the Oudmans are overdoing things by having 15 boars for 200 sows, but John feels that he gets better breeding results that way. There are often as many as five boars in one corral.

"As long as you keep their tusks trimmed once a year you won't run into any trouble," he said.

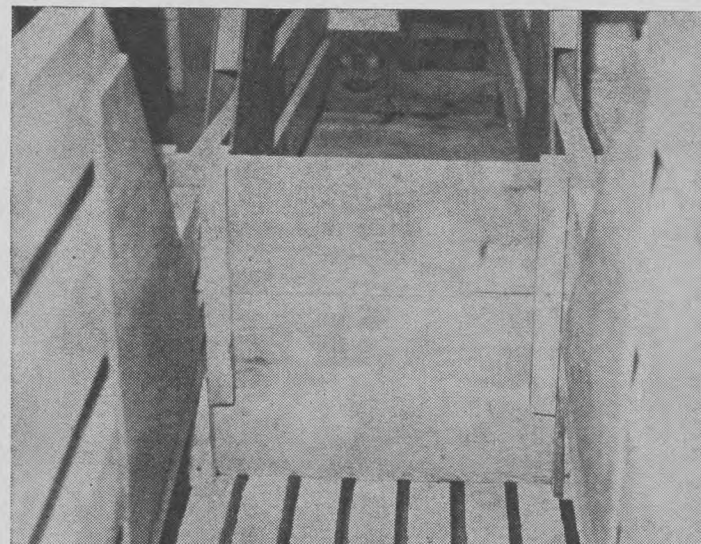
The Oudmans believe in early weaning. Most of their pigs are weaned in 3 to 4 weeks. The tails of their young pigs are cut the first day. This prevents tail biting later on when the animals are feeders.

An accurate breeding record is kept of each sow so that replacements can be selected on performance. Replacement boars are provided by Sten Berg.

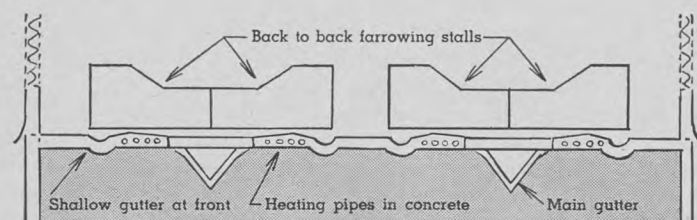
John and Anne Oudman came here from Holland in 1948. For 4 years John worked at the Magnusson farm at Innisfail, Alta., then moved the family to Taber where his father and brother raise hogs and sugar beets. When they decided to get a farm of their own, they chose the Lacombe area because they like a place with lots of trees. The Oudmans have four boys and three girls in school, and one child of pre-school age. Although she was a Home Economics teacher in Holland, and city-raised, Mrs. Oudman finds little trouble in adjusting to life on a Canadian farm.



Opening vent along wall gives more circulation in hot weather



Slatted area in each pen is over central gutters leading to sump



Cross-section through farrowing barn



A battery of pens with farrowing dividers removed for weaning

NUMBER 10 IN A SERIES

Let's chat
with
John Blakely

about history and the common nail

You probably never thought of something as ordinary as a nail having a history. There are Biblical references to the use of iron nails as far back as 1100 B.C.

British Artisans made nails for their Roman masters by hammering a piece of iron on an anvil. In North America, pioneer families would spend their winter evenings hand forging iron nails on a small forge beside the fireplace. The first machine to make nails from cold iron nail rod was invented in 1777 in the United States.

Wire nails did not put in their appearance until 1835 when a machine for their production was invented in France. This machine was the first means of producing nails in quantity at a low price and was, therefore, responsible for wire nails becoming the most popular fastener.

As wire production techniques were improved nail surfaces became smoother reducing the nail's gripping ability in wood fibre. This fact resulted in efforts to improve the nail's holding power. Special coatings, deliberate deforming of nail shanks, barbing, threading and finally the spiral nail developed by Stelco, are the steps the common nail has gone through in the interests of becoming a good fastener.

The important point of all this is that "Ardox" Spiral Nails didn't just happen. They are a step in a centuries old series of nail development in which Stelco is a leader. An important step too — for "Ardox" Spiral Nails combine an increase in holding power, a reduction in wood splitting, a reduction in effort to drive, and more nails per pound, to meet modern nail requirements.



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Cheaper Feedlot Gains

On his 640 acres, Lorne Parker's formula for continued high grain production and greater beef output at lower cost, is:

- No more summerfallow
- More fertilizer use
- 100 acres of corn for silage

by DON BARON

Editor

IF YOU WANT to talk beef production to Lorne Parker, you'll probably spend a lot of time in his office beside the kitchen rather than out in the feedlot on his farm 30 miles south of Winnipeg. For the challenge facing Parker, and other feedlot men too, is to get their costs low enough to leave a profit after they sell the steers. Farm records tell the story on costs. Parker has been keeping records on just about every detail of his feeding program at Ste. Agathe during the past 7 years.

He is making headway in paring costs too, for he has turned out beef at a production cost of 18 cents a pound.

Even that isn't good enough. He told us one day this spring, "We must take off another cent or two." He explained why. During the past

7 years, his feedlot profits haven't been good enough. Now, reports out of Ontario show that feedlot operators there are using a corn silage program to produce beef at a total cost of 15 cents a pound.

Farmers right across the country must meet that competition but there is nothing overwhelming about it. These low-cost gains aren't being made by integrated operators or by corporation farms. They are being made by farmers who are turning to intensive production on their own land, and then feeding the crop they grow to cattle in their own feedlots. Farmers anywhere should be able to use the same methods. Parker is using them.

He explained that when he took over his farm in 1952 on the heavy but rich Red River clay, it was under

the kind of farming program that had been common for a generation, and still is common throughout the area — a rotation of 2 years crop, 1 year fallow. By 1957, Parker had decided to get rid of the few beef cows, which ate too much feed for the dollars they returned, and turn to steer feeding. He put in 50 steers.

For a roughage, he tried grass silage and hay, but found the cattle wouldn't fatten on the silage. Next he tried oat and pea vine silage. This was better, and he was able to abandon his fallow program altogether. He began to use more fertilizer, and to buy a few more cattle each year. But the oat and pea vine silage only gave him yields of 6½ tons to the acre at best.

Last year, he quit oats and peas in favor of 95 acres of corn. By this time, he was feeding over 200 cattle a year, was growing enough roughage for them, and still grew as much grain as he grew when he had one-third of his land in summerfallow. He is having success with continuous wheat growing too — has grown wheat 5 consecutive years on the same land. This calls for heavy fertilizer application, particularly of nitrogen.

Last year was the worst possible year for corn silage. A late spring frost set back the crop. Then, frost hit again on August 7. Finally on September 6, the crop was frozen off and he had to begin ensiling.

Even so, he got 8 tons of good feed per acre from it.

CORN IS THE KEY

The year's experience just about convinced him that corn is the key to cheaper feedlot gains.

This conviction comes from careful consideration. Parker is an economist by training. He works at the University of Manitoba in the winter-time, and deals with records of farmer members of farm management groups in his area. They show him that many farmers who have turned to corn are finding it a profitable crop.

He figures that during a good growing year, he should get yields much higher than the 8 tons per acre he got last time.

In fact, he figures that corn and a feedlot may be the right companion enterprises on a wheat farm like his. They add up to a nice double-barreled enterprise for him — 440 acres of wheat as a cash crop or as feed for the cattle, and 200 acres of corn and hay for the cattle (he fed out 130 calves and 100 yearlings this past winter).

The corn is essential to his feeding program because his records show that straight grain feeding is too costly. He was feeding the cattle wheat worth \$1.60 per bushel the day we visited him. It was the cheapest feed available — and it was



Concrete for this feed bunk and the platforms along side, cost \$2,000. Calves that came into the feedlot in late November at 500 lb. should be ready for market in late June weighing 950 lb., and turn a good profit



Parker finds there is less waste if he forks silage down to the calves from the face of the silo. He has a two-row chopper to harvest his 100 acres of corn

too dear. As further proof, his records show that he has made a profit every year on the calves he fed (probably because they take more roughage, less grain), while some years, the yearlings didn't show a profit. High feed grain costs beat him with them.

Parker's feedlot is simple, and as inexpensive as he could make it, while still doing an adequate job. It has good drainage down to the Red River, a few hundred yards away. It is divided into two sections. A pole barn provides shelter in one while the top part of an old barn, set down on the ground, provides shelter in the other. Cattle from each lot have access to the horizontal silo which has a concrete base, and plank sides, and measures 48' by 100'. He figures it could hold up to 1,500 tons if it had to (a 15-ton crop of corn silage, on 100 acres, would provide that). Last fall, he built a new 150'-long concrete grain-bunk with 11½'-wide concrete platforms along each side. Cost of concrete was \$2,000 and he did the work himself.

UNANSWERED QUESTIONS

Although his feedlot is now operating reasonably well, Lorne can pose plenty of unanswered questions about feeding cattle. Would he be better to build a tower silo, for in-

stance? He knows waste is high from his horizontal silo. He visited farms to the south in the United States last winter, found the farmers there turning to tower silos, although frozen silage was a problem to them. He also wonders if he can grow corn continuously on the same fields. On lighter soils, it can be done, but what about his Red River clay? Time alone will tell. Another question — should he feed the cattle in the shelter of a building? In North Dakota cattlemen seem to be moving in that direction. He has found that calves won't eat out in severe weather, although cold doesn't bother yearlings at all.

He will have to answer his own questions, although he would like more leadership from governments and universities.

What about his feeding program? He has a scale right in the yard, so he can weigh cattle occasionally to see how they are doing. Calves, when they come to the lot in November or December, get 3 to 5 pounds of grain during their first 150 days in the feedlot, as well as hay or silage. Then they are implanted, and grain is increased to 10 to 14 pounds. The calves should be ready for market in July or August.

The grain that is fed during the early part of this program may be rolled barley and screenings, which

he can buy, although the screenings won't make a finishing ration. Wheat or barley is necessary then.

He finishes yearlings faster, putting them right onto grain with hay and straw when they come into the feedlot in late fall. He never full feeds, but puts yearlings up to 14 to 16 pounds grain per day.

18 CENTS PER POUND COSTS

Financing is a big problem in Manitoba but Parker says the situation is improving and anyone who has a good set of books and a credit rating should be able to get credit now. "We are getting the bankers trained," he chuckled.

His records show his costs of production are something like this: One lot of calves put on gains that cost 18.7 cents per pound. This consisted of 13.2 cents for feed (valuing wheat at \$1.50 per bu., oats at 50 cents, barley at 95 cents, hay at \$12 per ton, and oat and pea vine silage at \$4 per ton). Overhead totalled 5.5 cents, and this included cost of buildings, equipment, repairs, depreciation, interest on cattle, and a steep labor charge.

His costs have been as low as 18 cents but he hopes to reduce this figure even more.

But he still points out that year in, year out, since 1952, he has

made more money per acre growing wheat than growing cattle feed.

Why bother with cattle then? It's a good question. But there is an answer. This present year should be his best cattle year yet. He hopes for a margin of up to 6 cents on some of his cattle. He hasn't had that before. As he continues to find better cropping programs, and cheaper feeds, he should improve the cattle end of his operation. As it is, it gives him a diversified program.

One great need of Manitoba is for cheaper feed grain.

He is feeding wheat this spring which is worth \$1.60 per bu. It's expensive cattle feed.

He is particularly interested in the efforts of scientists at the Regina Experimental Farm to develop a good feed wheat. Such a wheat, if it yielded 40 bu. per acre, even though a bit lower in protein, could mean cheaper cattle feed.

This spring, he intends to try some barley again — fertilizing it heavily in hopes of getting higher yields and thus a cheaper feed.

Manure is building up his corn land, but he is still putting a lot of fertilizer on now.

On all his wheat land, he puts 80 lb. per acre of 27-14-0, while he uses 100 lb. per acre of 23-23-0 on all corn.



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Feed cart fills upper and lower feed troughs simultaneously [Guide photos]

Egg Farm in the Wheatlands

by **CLIFF FAULKNER**

Field Editor

**Stan Johnston decided
to sell his grain on the egg market**

WHEN STAN JOHNSTON came home to Eston, Sask., he intended to go back to wheat farming. He had a half section of land and figured he could buy more as he expanded. That is when he ran up against a factor that you would not expect to find so far from any large population center — high land prices. He was going to have to borrow a lot of money to get started anyway, but he did not want to sink most of it into land purchase.

"This meant I'd have to consider a beef feedlot, or hogs," said Stan, "or poultry."

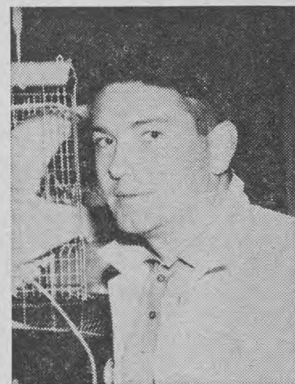
He mentioned poultry last because it really was the last thing a man would choose for the rolling grain and cattle country of western Saskatchewan. But the more he and his wife, Pat, thought about it the more convinced they became that poultry might be the answer. One packing firm tried to get them to go into the broiler business, but they did some back checking on the broiler market and found it too unstable for their liking.

"We went knocking on a few doors," Stan said, "and found there was a need for quality eggs in this province. About this time there was a row going on in the Regina papers about Safeway bringing in Winnipeg eggs to sell in their stores. That clinched it as far as we were concerned. We decided to go into the egg business."

A MARKET CONTRACT

The decision was not reached without any thought to where the eggs would be marketed. The Johnstons got a contract to deliver their production to Canada Packers at Saskatoon. Stan is not worried about the economics of producing eggs 140 miles from his market. He has his half section, plus another section rented from his father, to grow feed grain. Any extra grain needed is easy to come by because they are surrounded by grain farms. The Johnstons feel this will give them a decided advantage over poultrymen who buy a complete ration from a feed mill.

Neither Stan nor his wife had had any experience with chickens. Born at Eston, Stan grew up amid the broad vistas and extensive farming methods of the wheatlands. His father was (and still is) in partnership with two brothers in the Johnston Farming Company — a large-scale grain growing enterprise. In 1955, Stan left home to take a geology degree at Wheaton College, near Chicago, where he met and married Pat. After graduation, Stan took a course in petroleum engineering at the University of Oklahoma, then went to work for the Haliburton Oilwell Servicing Company. The Johnstons were first sent to Red Deer, Alta., then to Drayton Valley, and finally to Edmonton, where Stan was district engineer for the company.



Stan Johnston

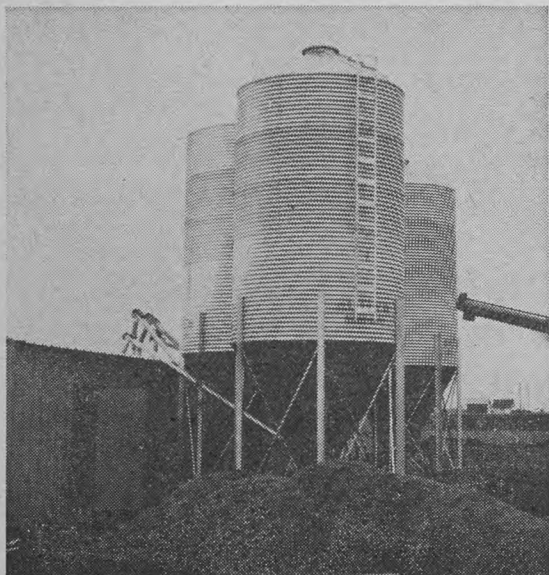
"But I was born a farmer and I wanted to get back," said Stan. "The oil business is fine until your kids get older and you want to settle down in one place."

They came back to Eston 2½ years ago and Stan went to work for the Johnston Farming Company while he looked around for a place of his own. Work on their poultry plant was started last January. Financing was handled through their local bank in Eston.

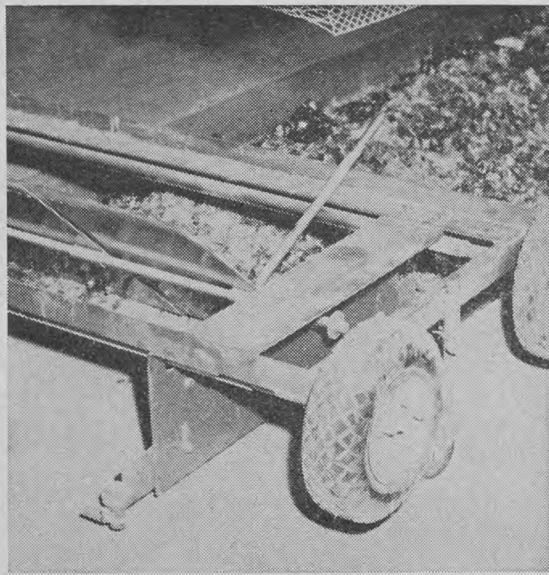
STEEL FRAME BUILDING

The 288 ft. by 66 ft. laying house is as modern as tomorrow. It is a steel frame structure with concrete foundation and floor. The building is sheathed with coated sheet steel and insulated with 3-inch fiberglass which is lined with vinyl. It is divided into two wings, each designed to hold 10,000

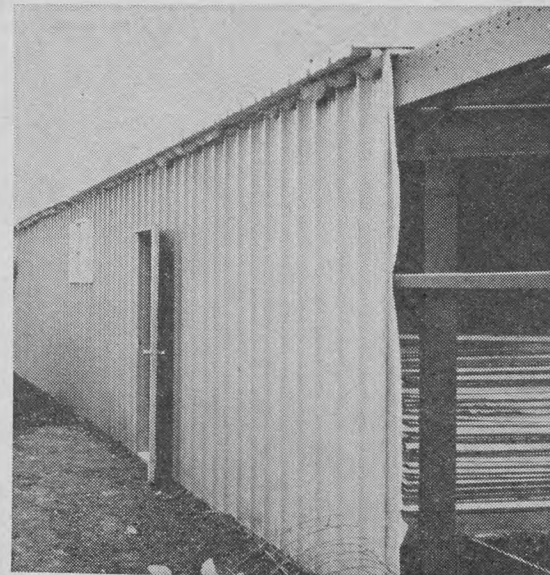
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Grain is augered from hoppers to the mixing room



Shown is the scraper blade of his gutter scraper



Ventilators and wall construction in new section



[MMRA photo]



[Guide photo]

ABOVE: The trend is toward larger dams and aboiteaux strategically located to protect thousands of acres from ravaging Bay of Fundy tides
LEFT: A variety of tractor-powered ditchers dig the shallow ditches and spread the soil on the dales

The Maritime Marshlands

WHILE INTERMITTENT TALK goes on about harnessing the 45-foot tides of the Bay of Fundy, the breakwaters, dikes and dams of the Maritimes Marshland Rehabilitation Administration continue to protect some 90,000 acres of the marshes from the sea. It is a federal responsibility to keep out the salt water; it is a farmer and provincial responsibility to make effective use of the marshes saved from the sea.

The battle to protect the silt and silty loam marshes has a chequered history spanning three centuries. A key feature has long been the use of aboiteaux, a word derived from the French abat-eau, or water shield. The aboiteaux keep out the salt water and permit the drainage of fresh water as the tides recede. The protecting works include 248 miles of dike, 473 aboiteaux, 17 miles of river bank control installations and three major tidal dams. With the advent of federal funds and modern machinery the trend in protection is toward the strategic location of larger dams or aboiteaux instead of numerous smaller devices farther inland.

The marshland soils, built up from countless deposits of silt, have poor internal drainage. The early settlers laid out the fields in narrow strips, often one chain wide and known locally as dales. Between these dales run the parallel ditches which drain the water off to the laterals and so on to the sea.

Tom MacIntyre, superintendent of the Experimental Farm at Nappan, N.S., points to the success of the tractor-powered ditch diggers and ditch cleaners. Mechanization has arrested the deterioration of the marshland ditches. Machines are loaned to farmers in the Nappan area while the New Brunswick subsidy of up to \$400 on the purchase of machines has encouraged their use and some 15 Melco ditchers were in use last year.

Hay and pasture are the traditional marshland crops. Until the internal combustion engine appeared, the cities of the eastern United States took large quantities of marshland hay; the loss of this market was reflected in the decline of the marshes. In recent years, a growing livestock industry in Newfoundland has given marshland farmers a market for hay.

The marshlands, steeped in the history of settlement, have received vast engineering and financial assistance since the inception of MMRA in 1948. Arnold Roberts, director of New Brunswick's agricultural engineering branch, says, "The key to farming on the marshes is no longer engineering; now it's a question of making economic use of the land which has been drained and protected. Some are making a go of it, others are not."



[Guide photo]
Gerry Hicks of Middle Sackville, N.B., keeps about 450 head of beef cattle on the marshland

"THE GRASS is all we have and we have to make the most of it," said Gerry Hicks as we tramped across his 500 acres of marshland at Middle Sackville, N.B.

The marshes are a unique feature of Maritime farming; flat, criss-crossed with drainage channels and bare of trees, they are the silty soils protected from the ravages of the high tides. They are generally more fertile than the adjoining upland soils, but they are deficient in phosphorus and nitrogen; they require lime if good grass, hay and legumes are to be grown.

These marshlands comprise 8 per cent of the croplands of New Brunswick and Nova Scotia and are shared by 3,800 farmers. In common with other livestock farmers, Hicks operates his marshlands with some upland acreage. It's a long winter on the marshes from mid-October to June 1. In the fall, the feeding value of the grass deteriorates with the wet and the cold, while in the spring, cattle would spoil otherwise good grazing lands. They would have, in the words of an old saying, "five mouths"; their hooves would damage the sward on these wet silty lands and ruin unprotected drainage channels.

"But it's a grand soil," says Gerry Hicks, "if you can keep it drained." The sides of the main drainage vents have to be protected from the cattle by fences, but the marshes have their own special advantages. Water holes are where you care to dig them and cattle require no salt

A report by Peter Lewington
on one of the last cheap land areas

Rancher on the Marsh

and very little mineral. Farmers on the marsh have to live with the special restrictions imposed by a land which is often useless without drainage, fertilization and liming, but the pressures of inflated land values, evident in parts of Ontario and the West, haven't hit the marshes. "The very best land can be bought for \$65 per acre," asserts Hicks, "and you can buy the less accessible and poorly drained land at your own price." With the production of the marshes so dependent on the effectiveness of the drainage channels, Hicks has his own tractor-powered drainage machine.

Hicks can carry some 450 head of beef cattle; he buys yearlings, some in the fall but most of them from March to June. "Even though our cattle do not have a long pasture season they do make good gains. They gain right through the summer. In fact, in the month of September, they make the best gains of all." Most of the cattle are finished off grass, with some 15 per cent making Red Brand and the rest making the standard grades. The cattle which cannot be finished on grass are stabled and fed marshland hay and grain. "You have to stable and grain feed to get the branded beef," says Hicks.

"It's a hard country to make a living in, but every time I go away I'm glad to get back."

Just as some Canadian farmers wouldn't swap their corn country, their foothills or their mountain range, so the rancher on the marsh feels the pull of the unique Maritime marshes.

Two Worlds

Mushrooming population and food needs pose the challenge of the century. While the rich get richer and the poor get poorer we salve our conscience with a painless pinch of aid. It's not enough

IT IS AN unforgettable experience to go from one world to another and to see the contrast between the living conditions of the rich and the poor. You can see it, for instance,

in French North Africa, where there are gleaming white mansions set in the grace and splendor of palm-lined boulevards, and there are also hovels made of bags and flattened

gasoline cans. Such contrasts are supposed to be passing, but nearly 70 per cent of the world's population enjoy 10 per cent of all the assets; the rich are getting richer and the poor are getting poorer. As Sidney Dell, a distinguished economist with the U.N., in his book "Trade Blocs and Common Markets" observes, "The Zulus have a saying that when the white man came they had the land and he had the Bible; now they have the Bible and he has the land."

A hungry man is not just an irritation to our conscience, but a threat to our very existence. If for no better reason than for self-interest, we must pay more than lip service to the global war on poverty, malnutrition, illiteracy and disease. Even now, some 1,500 million suffer from some degree of hunger and by the time a young Canadian farmer has paid off his farm mortgage the population of this world will have doubled.

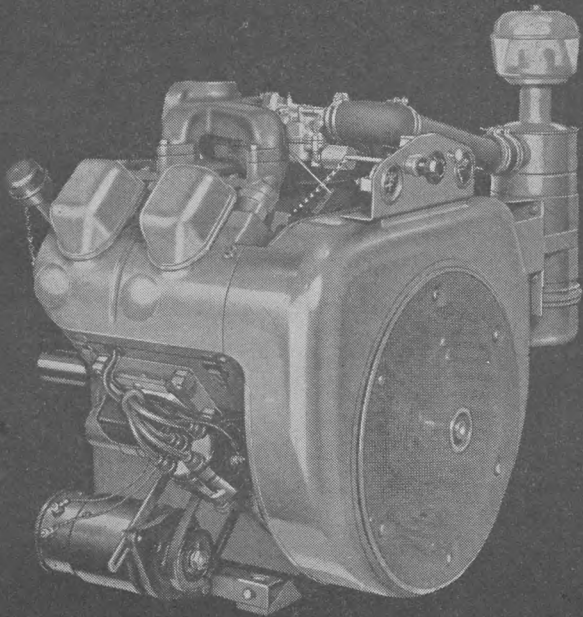
Poverty is not new to this world, but the magnitude of it is something which has not previously challenged man's existence. FAO puts it this way, "Without any improvement in the present level of nutrition, food supplies would have to be increased by 100 per cent for Africa, 200 per cent for Latin America and 150 per cent for the Far and Near East by the year 2000. World food supplies would have to be doubled by 1980 and trebled by the turn of the century in order to provide a level of nutrition reasonably adequate to the needs of all the world's people." World food output must be increased, almost overnight.

Does this mean here is an unlimited market for those very few products which countries like Canada have in excess of domestic demands? In Mr. Dell's eyes, the West stands indicted: "Nearly a generation has passed since the end of the war, and we are still debating with ourselves whether we should not devote 1 per cent of our income to the needs of the under-developed areas. Meanwhile the gap between rich and poor grows steadily wider, and the danger of a breaking point draws inexorably closer."

Paul Martin, Secretary of State for External Affairs, recently announced significant increases in our contributions to the World Food Program. This will bring our total contribution to about half the estimated cost of the CBC pavilion at Expo '67.

LESS THAN 1 PER CENT

Our total contributions to all food programs, while favorable when compared with the efforts of some other nations, are still but a fraction of that 1 per cent of income yardstick. Food aid, however great, only alleviates scattered and specific problems; it cannot solve the dilemma of feeding the world's exploding population. Food aid on the basis of periodic surplus disposal does little to strengthen the economy of the recipient country; if it inhibits the development of their agriculture it is even undesirable. The Organization for Economic Co-operation and Development (OECD), of which Canada is a member, places food aid in perspective: "Food aid should not be regarded as a permanent arrangement. It would not be an economic solution in the long run for the developed countries to maintain, by subsidy, a large domestic agriculture and to export their surpluses on non-commercial terms to the less developed countries. World economic growth can best be promoted by having each region produce the industrial and agricul-



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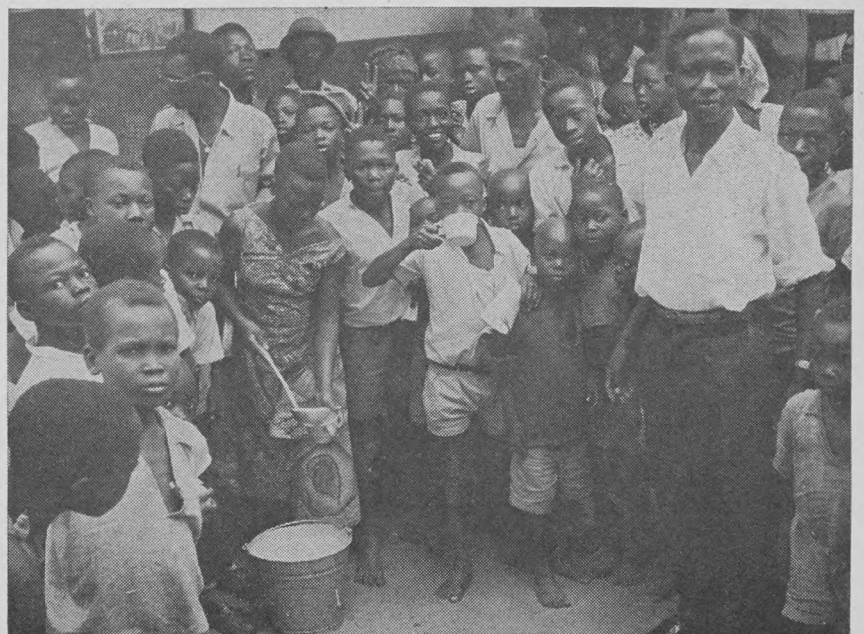
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Milk is provided to these children by the U.N. Refugee Relief Organization in the Congo, but if they are to have a better future and economic independence they must also be provided with good tools, seeds and fertilizers

[FAO photo]

- Pakistan's yield per acre, which is amongst the world's lowest, has been stagnant for a decade, with the exception of 1963.
- India's 1964 harvest was a bitter disappointment and yet her population grew by twice the total Canadian population.
- The Far Eastern population increased by 2.3 per cent, the available food by 2 per cent.
- Our world, which now has 1,500 million hungry, will have to cope with 6 billion mouths by the year 2000.
- For 5 years now there has been no significant increase in agricultural production on a world-wide basis.
- Mainland China's food production, while improving after disastrous harvest conditions, is still substantially below 1958 levels.
- Japanese dietary levels are below those of the West. If Asia is to attain the Japanese levels, food production will have to double — even if there is no acceleration in population growth.

tural goods for which it is best fitted."

The granddaddy of all aid programs is P.L. 480, the U.S. Food for Peace Program. The production of some 30 million acres south of the border is currently exported through U.S. government channels. President Johnson has called it, with a great deal of justification, "One of the most inspiring enterprises ever undertaken by any nation in all history. Of the 100 million recipients of our donated foods, 70 million were children. The P.L. 480 sales programs are designed to strengthen the economies of countries; the long range solution rests in improving the productive capacity of the developing nations." As P.L. 480 enters its second decade there is some well-founded criticism that the program does not necessarily strengthen the economy of the developing nation. If it puts a damper on agricultural production or if the local currency, developed as a result of the sales, is used for political ends, then the results can be actually damaging. One of the aims of U.S. policy is to use P.L. 480 to build or restore the economy of a nation so that it can become a cash customer. Japan is the prime example of this and Western Canada farmers have been among the beneficiaries. As an official of Trade and Commerce put it, "We rode into the Japanese market on the coat tails of P.L. 480."

There are strange ramifications of P.L. 480 which also affect Canada. The production of eggs, due to feed grain available under P.L. 480, has increased in Israel and Poland. Some Polish eggs have come into Canada and the Israelis were obliged to place a quota on egg exports owing to the heavy subsidy burden incurred.

NOT AID, BUT TRADE

Aid, however generous, is but a short-run palliative. What developing nations desire in the long haul is not aid, but trade. In this regard they are very vulnerable as they have only a narrow range of commodities to export. Some of these compete with surpluses in the developed nations and others suffer from wide swings in commodity prices, which more than wipe out the benefits of aid. The basis of the economy of Malaya is rubber and last year that country had to adjust to a drop in world prices of some

20 per cent. Says Dell, "Exporters of textile fibers and the beverage crops suffered adverse movements in the terms of trade of as much as 25-30 per cent from 1955-60. Figures like these provide acid footnotes to all the well-meaning contemporary talk about aid to underdeveloped countries. The losses in terms of trade have been much greater than anything they received in the way of foreign aid."

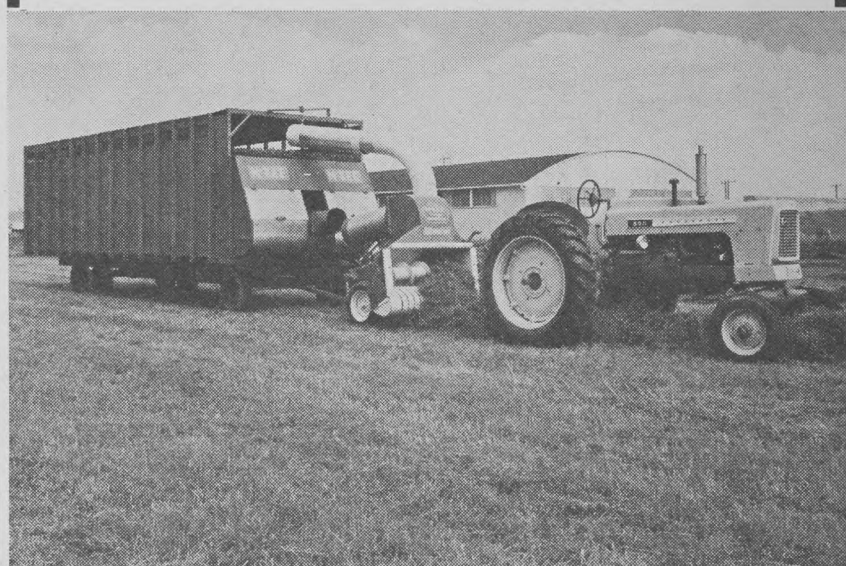
The problems of a country plagued by food shortages, growing population and lack of foreign exchange can only be solved ultimately by better trading conditions. As Mitchell Sharp observes, "Increased trade could in turn attract developmental capital and multiply the benefits of external aid."

Fortunately while the needs, even demands, of developing nations are growing to frightening proportions, there is also a potential to produce. Irrigation, fertilizer use, improved management, protection from disease, better seeds and improved transportation and marketing all play their part. Sociological adjustments and changes in land tenure, far more complex than those we have to grapple with, have to be faced. The correlation between education and a full stomach is close. All but one of 23 major grain-producing countries where 80 per cent or more of the people were literate had agricultural industries that were expanding. Even in the rice paddy it pays to know.

Our righteous indignation when communism takes over an undeveloped country, would be better replaced by regret for our procrastination and a firmer resolve for the future.

Foreign aid is too often regarded as a convenient safety valve. We are going to have to give far more generously to preserve what we already have. Quite apart from any moral aspects, dividends accrue as nations achieve that infinitely difficult transition from chronic underdevelopment to a cash trading position. We can hope, with the British historian Arnold Toynbee, that, "Our age will be remembered, not for its horrifying crimes nor its astonishing inventions, but because it is the first generation since the dawn of history in which mankind dared to believe it practical to make the benefits of civilization available to the whole human race." V

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New Classes Double Prizes

AN INCREASED prize schedule for fewer sheep and swine classes has been announced by the Provincial Exhibition of Manitoba. P. A. McPhail, manager of the Provincial Exhibition, says that this will be the first fair to co-operate with the Canada Department of Agriculture in a new "pilot" classification for sheep and swine.

The Provincial Exhibition of Manitoba will be the first fair to present a completely new prize list to all breeders of beef and dairy cattle, sheep and swine.

The new schedules represent drastic alterations in prize lists. There will be only eight beef cattle classes instead of the previous 14 to 18 classes and dairymen will have only nine classes to enter. Each breeder will be generally restricted to one entry in each class. Total prize money offered for each breed is about double as the Canada Department of Agriculture matches each prize in the new classifications dollar for dollar.

Emphasis under CDA's new classifications has been put on ability of livestock to produce. In swine and beef cattle classes this item of pro-

duction is meat, end product of a complicated breeding and feeding program. The classifications have been created to permit exhibitions to reward those stockmen who show animals with the best potential for producing meat.

In sheep the emphasis is double, with meat the primary target and wool a secondary aim.

Dairy cattle are bred for milk production. It will be animals most able to produce quality and sufficient quantity that will get top money.

At Brandon, sheep will show in "paired" classes, with Suffolks and Cheviots shown as one breed group, Southdowns and Shropshires as the second and Oxfords and Hampshires as the third. In the swine classes, Yorkshires will be grouped with Landrace and Lacombe as a single class for the three breeds. V

Carcass Quality Slipping

AN INCREASING number of over-finished market hogs could easily put Alberta back into the position of the lowest grade A hog-producing province in Canada.

Too many pigs are being marketed at maximum weights for

grade A carcasses, according to Mr. A. J. Charnetski, livestock supervisor for the Alberta Department of Agriculture. He says that many grade B carcasses, weighing 165 lb., could easily have qualified for an A grade if they had been 10 lb. lighter. This would have meant a saving in feed and a larger net profit per pig. Mr. Charnetski points out that the difference between A and B grade pigs of the same weight is \$4.50 per head.

He recommends three steps to improve hog grades: marketing between 190 and 210 lb. liveweight, using a fully balanced ration, and using sound breeding programs based on superior stock. V

Fiber Will Cause Pig Scours

"MOST CASES OF SCOURS in weaner pigs are caused by weaning rations that contain too much fiber," says Dr. G. S. Wilton, pathologist with the Alberta Veterinary Laboratory. Young pigs often suffer from scours caused by fiber in the feed which they pick up from the sow's trough.

To prevent this, Dr. Wilton suggests feeding low-fiber weaner and

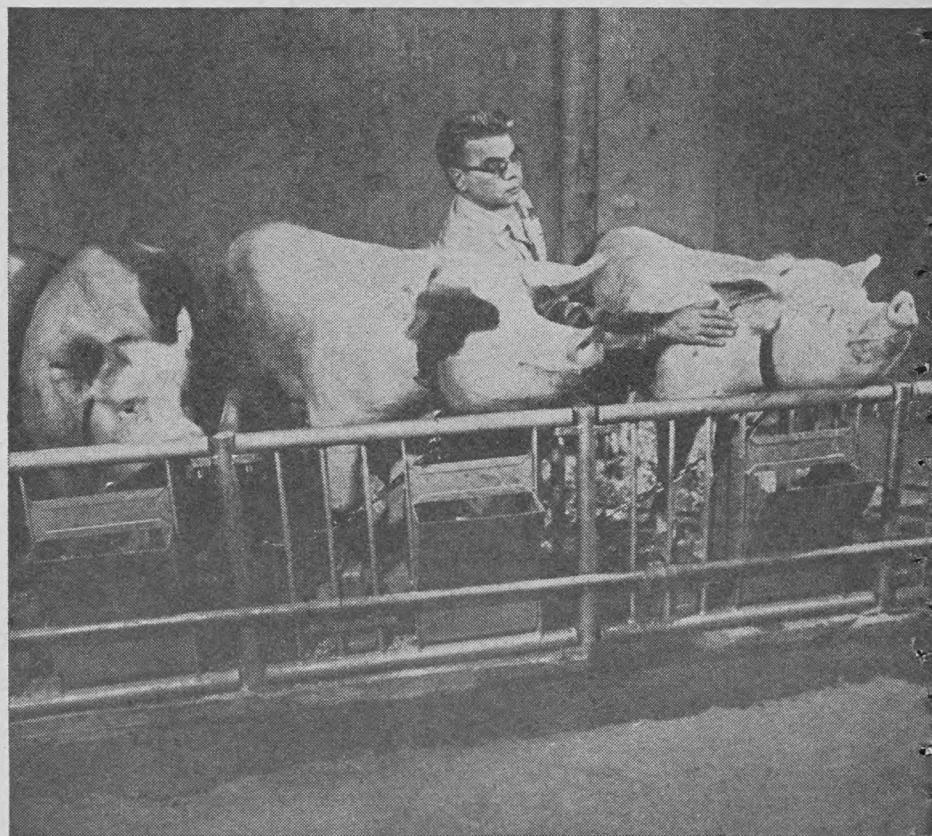
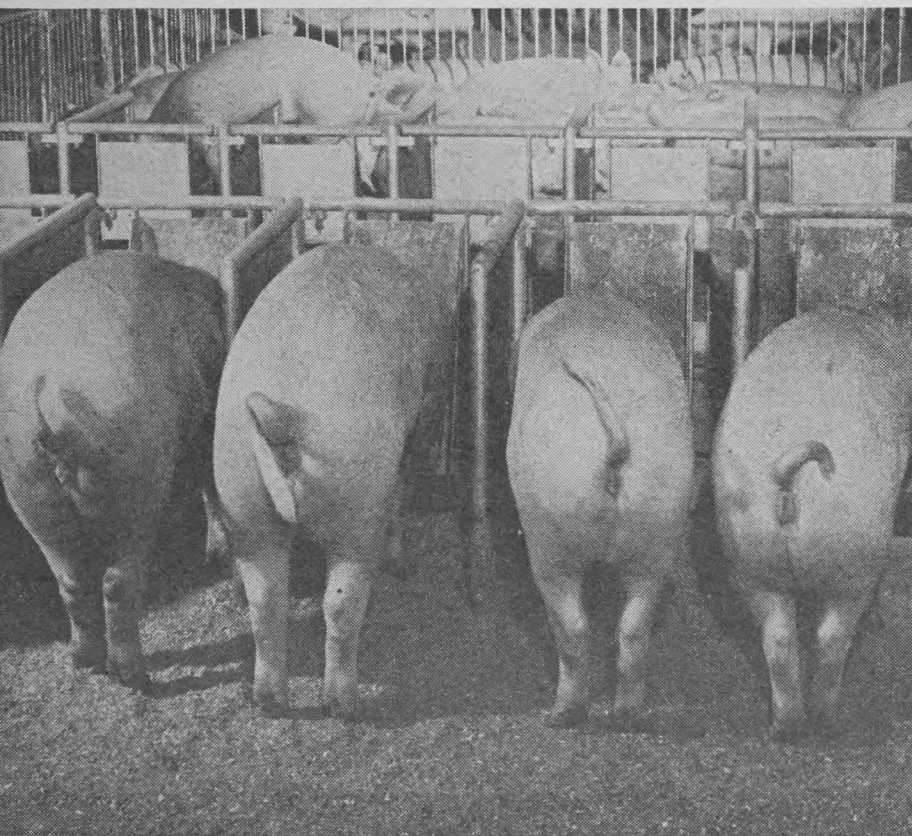
creep rations. To treat unthrifty pigs, he recommends a special laxative ration for 3 days before putting them onto a balanced low-fiber ration. This laxative ration may consist of shorts or middlings with milk and one cup of mineral oil or raw linseed oil for every 250 lb. of pig per day.

Scours may also be caused by bacterial infections. Dr. Wilton advises producers who suspect this to contact a veterinarian. V

Selenium for Stiff Lambs

STIFF LAMB disease need no longer occur, says Dr. D. J. Campbell, Department of Parasitology, Ontario Veterinary College, Guelph. Where formerly the disease was thought to be caused by a simple vitamin E deficiency, it is primarily caused by a deficiency of the trace element selenium according to Dr. Campbell.

The disease occurs during the first few weeks of a lamb's life. Symptoms are a slow stiffening of the joints and increasing tiredness in the animal until it cannot get up. Eventually the muscles that control swallowing are affected and feed often



can feed alone give 24% more grade A's?

Here at the SHUR-GAIN Research Farm, we used to think that 65% Grade A's from a test pen of pigs was pretty good. As a matter of fact, 65% A's is still pretty good (it's 26% higher than the national average). This was achieved

with SHUR-GAIN's regular hog growing and finishing rations.

The new SHUR-GAIN Limit Hog Feeding concept was introduced last year and we have continued to test this concept in our new swine research facilities.

Our last major comparison between our regular SHUR-GAIN Hog Finishing program (giving around 65% A's) and the new SHUR-GAIN Limit Feeding program has given an increase of 24% more A's with the new program. On the test lot

enters the lungs to cause a mechanical type of pneumonia. At first, temperature is normal; however, as secondary infections develop, it may rise.

In OVC trials, when about 4,000 lambs were injected with selenium a few days after birth, no incidence of stiff lamb disease occurred.

Selenium is available from veterinarians and should be used according to directions. V

Slatted Floor for Sheep

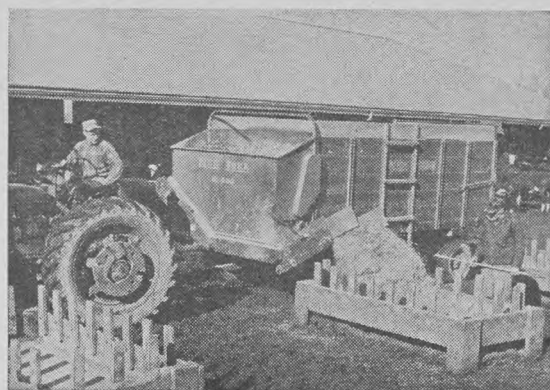
A RAISED slatted floor 30' by 170' and 3' from the ground has been the wintering ground for a British ewe flock for the past 3 years.

It is an open air pen with no roof, a concrete wall for shelter on one side and strawbale walls for two other sides. The fourth wall is open.

The pen provides each ewe of the 400 ewe flock with 13 square feet of floor space. The floor consists of 8' x 8' sections made up of 3" by 1" slats bolted to an angle-iron frame with a 3/4" gap between the slats. These sections are supported on adjustable iron stands with concrete block bases. The floor is dismantled once every 2 years for cleaning.

Wintering on this open air slat floor has apparently had no ill-effect on lambing averages which have been between 165 and 170 per cent during the 3 years. V

Let Livestock Market Corn

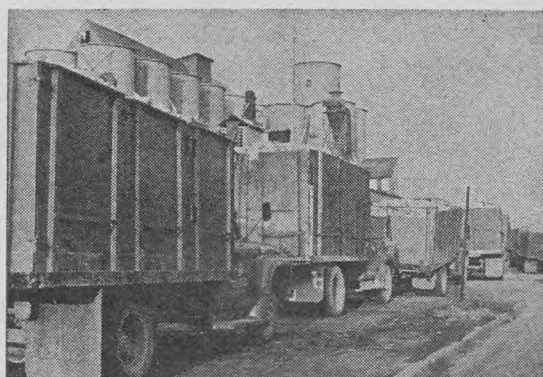


High-moisture corn helps put fast gains on the steers in the John R. Stewart feedlot at Strathroy, Ont.

LAST FALL John R. Stewart of Strathroy, Ont., brought in Western steer calves which averaged 503 lb. The last bunch of calves arrived on November 1 and his first load of 61 head was sold on April 17 at an average weight of 923½ lb. With

such records as these, it is easy to understand the growing enthusiasm for feeding high-moisture corn to livestock.

Here is the Stewart ration for finishing beef cattle: 1 lb. of chopped hay ("Just enough to stop the



With an expanded acreage and delayed maturity of the corn, drying facilities were severely overtaxed last year

[Guide photos

silage freezing to the bed of the wagon"), 1 lb. of 65 per cent concentrate, free-choice mineral, corn silage and 5 lb. of high-moisture corn. Stewart has been getting excellent results by storing the high-moisture corn in a conventional concrete silo. In neighboring Lambton County, Jim Goodhand uses a sealed storage for the high-moisture corn fed to his hogs.

Here are some of the reasons why a system in which high-moisture corn is marketed through livestock looks attractive:

- There will be no harvest bottlenecks from overtaxed elevator and drying facilities.

- Farmers who have corn cribs and corn pickers which are due for replacement can swing over to the new system.

- High-moisture corn is harvested earlier than dry corn, with less field loss.

- The corn has a high feed value and is more digestible than dry corn.

Memories of last fall's difficult harvest will further stimulate interest in high-moisture corn. Last fall, the corn dried very slowly in the field. This placed a heavy burden on elevator and drying facilities. Subsequently there were reports of ear corn spoiling in the crib and even dried shelled corn heating as it moved into the Quebec feed market. Farmers who stored their corn as high-moisture feed had none of these headaches.—P.L. V



SHUR-GAIN LIMIT FEEDING did it

of 119 pigs, 107 graded A—that's 90%.

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White Scours Threaten Calves

STOCKMEN should be especially alert this spring for white scours of calves.

According to Dr. T. Van Dreumal of the Manitoba Provincial Veterinary Laboratory, resistance of calves to this hard-hitting bacterial disease seems to be low this spring. It has been diagnosed in 21 Manitoba herds since January and in some herds up to 30 per cent of the calf crop was lost.

White scours is highly contagious within a herd. The bacteria of both acute and chronic forms are transmitted through the feces of infected animals, the dirty udders of nursing cows, and unsanitary troughs and pails. Calves under 1 month of age are most susceptible.

Dr. Van Dreumal suggests that white scours can be prevented or reduced by these methods:

1. Feed all calves colostrum or "first milk" during the first few days of life.
2. Pen calves individually, or in similar age groups. Turn the calves out, if practical.
3. Clean and disinfect calf pens after each birth.
4. Locate troughs where they cannot be contaminated with manure.

5. Disinfect feeding pails regularly.

6. Isolate young calves purchased from another farm for several days.

7. Do not buy very young calves. V

Milk Expert Sees Wider Markets

NEW DAIRY food products being developed for the modern food market may give dairymen much wider markets for their milk. Some of these products are already being test marketed in the United States, according to Dr. S. T. Coulter of the Dairy Industries Department at the University of Minnesota.

The list of products includes two types of sterile milk which keep fresh for months without refrigeration. One product is whole sterile milk produced by fast heating and the other is concentrated sterile milk. The sterile milk product has made possible the single service nursing bottle. This bottle contains sterile milk and the nipple is protected by a sterilized wrapper.

Other products involve more processing. Bakers are using more and more milk sugar and new plants are being set up to manufacture it. Cereal makers use milk protein in their products to give higher food values. Spray-dried skim milk is

combined with a wide variety of garden and orchard produce to develop many new instant foods.

New butter plants that will manufacture up to 20 million pounds of butter per year in continuous churns will soon be built. These plants can reduce processing costs which should mean higher returns to dairy farmers and lower prices for consumers. V

New Mastitis Program

A NEW PROGRAM to enable Alberta dairymen to detect cows infected with mastitis and to decide which should be culled and which are likely to respond to treatment will soon be set up. According to Dr. J. G. O'Donoghue, director of the Veterinary Services Branch, Alberta Department of Agriculture, a field research project is under way to obtain information for setting up the new program.

The control methods will make use of the Whiteside and California mastitis tests. Both tests provide a simple means of measuring the number of white blood cells in milk and the degree of udder inflammation. They have been successfully used for screening bulk milk samples on a herd basis and for identifying cows that should be quarter sampled for a complete laboratory examination. V



[Guide photo]

**Overfitting dairy
replacements doesn't
pay off in the milk pail,
and it results in higher
culling for infertility**

Overfeeding Damages Heifers

THE THREE major reasons for culling dairy cows are low production, infertility, and udder troubles. Since the average productive life of a milk cow is a scant 3½ years, it is no wonder that Dr. J. T. Reid and his associates at Cornell University are trying to find the causes.

In his trials, Dr. Reid wants to find out how various levels of nutrition for heifer calves from birth to first calving affect their reproduction, production, size and longevity.

He fed heifers at low, medium and high levels of nutrition. All the heifers were bred at the first heat occurring after 18 months of age. Following first calving, all of them were given the same good quality hay, silage and concentrates. Sufficient time has now elapsed for any significant effects of these various nutrition levels to show up.

Up to first calving at about 700 days of age, a number of body measurements were in direct relationship to the levels of nutrition. After calving, the heifers from the low level of feeding gained at twice the rate of the highly fitted heifers. The weight of the first calves of all the heifers was in proportion to the levels of feeding to calving time. At subsequent calving, however, there were no significant differences.

Ease of calving showed a similar pattern; more of the low nutrition level dams required help at first calving but no consistent differences were observed at subsequent calving either for ease of calving or in the health of the calves. Average calf losses through to the fifth pregnancy were similar for all three feeding levels.

It is interesting to note that death

or culling losses through to the fifth calving were similar for all groups. The reasons for culling, however, differed. Infertility took the highest toll in the highly fed group while mastitis was the prime cause of loss in the medium group.

In summarizing the results to date, the Cornell researchers conclude that, "The performance of cows reared on the high plane of nutrition is inferior to that of those reared on the lower nutritional levels. Intensive rearing is uneconomical, at least when heifers are bred as late as 18 months of age. The additional size attained by heavy feeding was not accompanied by a commensurate increase in milk output. Although the lifetime performance will decide the relative merits of the two lower planes of nutrition studied, the results of this experiment demonstrate that levels of nutrients much below those recommended in current feeding standards for growing heifers do not impair productivity. Furthermore, these results imply that the plane of nutrition provided during lactation has a much more pronounced effect on milk yield than does the level of feeding imposed during the early rearing period."

These experiments tend to confirm the observations of experienced dairymen; overfitting the growing heifer is neither economic nor desirable. At a recent large sale of dairy cattle the more wily dairymen were seen to lose interest when highly fed heifers came into the ring.—P.L. V



A horse of a different colour!

The work-hungry animal with the shiny red paint has turned the old gray mare out to pasture. Canada's farm-horse population has practically disappeared.

Rapid changes, in fact, are taking place in every field of farming. Fewer workers. Larger farms. More mechanization. These are trends come true. Yet these are only minor compared with some of the developments the future holds. Your success in the highly competitive, ever-changing business of farming will come only if you are prepared to meet the future with an energetic, open mind. The rewards for this will be enormous.

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The 5.5-acre hatchery-breeding farm entrance on the outskirts of Edmonton

This independent poultry breeder, hatcheryman and egg producer says the

Independent Poultryman Can Survive

FROM HIS 8,000-hen flock, Bastiaan De Zeeuw produces winners in Random Sample Egg Production Tests, sells chicks throughout two provinces, and sells eggs retail right off the farm.

He now ranks in the coveted "top quarter" of United States and Canada Random Sample Egg Production Tests, and consistently wins first or second place in the Random Sample Tests held each year in Alberta.

Owner-operator of the 5½-acre De Zeeuw Hatchery and Breeding Farm on the southern outskirts of Edmonton, Alta., for the past 30 years, he is still confident that integration isn't going to wipe out all independent poultrymen. His own experience proves the point.

As a breeder Mr. De Zeeuw has experimented throughout the years with crossbreeding of heavier types, but he has now settled on the small, single comb White Leghorn. His 752 Layer was the result of many years of testing (plus a lot of money).

He selects for light weight — 4.5 pounds is the limit for a pullet at the end of her breeding season. Roosters also are selected for smallness because smaller birds give better feed conversion in terms of pounds of feed consumed per pound of eggs produced.

The sound economics of this exacting balance of weight versus production has shown up in recent Random Sample Tests. Income of the 752 De Zeeuw entries was 48¢ above the average per bird in 1960, 55¢ per bird in 1962 and 71¢ per bird in 1963. In the 1963 test the net income per chick started was \$2.14 against the test average of \$1.43.

Average egg production per hen housed in 350 days was 232.9 in the 1963 test, against a test average of 217.5. Birds ate 4.9 pounds of

feed per dozen eggs against the test average of 5.5.

The present De Zeeuw breeding flock consists of over 8,000 pullets and 700 cockerels. The bulk of the 1965 chicks will go to hatcheries in Alberta and Saskatchewan. Chief customers are the hatchery divisions of the Alberta Poultry Marketers, Ltd., a province-wide co-operative, and Saskatchewan Co-operative Creameries Limited. A substantial percentage will go to farm customers direct from the hatchery.

The birds are housed in a three-storey building 105' long and 30' wide. Half the space is in test pens maintained the year round. Completing the layout are a single-storey hatchery-shipping room, 24' x 30', with a retail egg sales and cold storage room adjoining, and two 100' x 32' brooder houses.

All buildings have thermostatically controlled heating from gas furnaces, plus fan ventilation, as well as automatic watering and feeding systems. Cement floors are essential, Mr. De Zeeuw believes. He changes the deep litter in the brooder houses with every new incoming flock.

The location of the farm on Highway 14 on the southern rim of Edmonton (with its fast-growing population of 360,000) is well-suited to retail egg sales — although taxes on the 5.5 acres have risen from \$13 per annum in 1931 to \$960 in 1964. A steady stream of customers drives in off the highway to pick up the large, fresh eggs for which the farm is famous in the area. The price of the De Zeeuw eggs over the years has never dropped below a 40¢ per dozen yearly average.

Mr. De Zeeuw is in favor of the proposed marketing board for eggs which is now under discussion by egg producers throughout Alberta. "At the present time," he points out, "producers are in competition with one another — and a system of centralized distribution would help

Poultry

stabilize the market and give producers more margin of profit."

The egg sales room at the De Zeeuw farm is bright and airy — equipped with a large cooler room — automatic egg-washing equipment and a full-time sales girl chosen for ability to deal with the public.

Eggs are graded right on the farm. Mr. De Zeeuw says he could not have achieved his present status without the unstinting assistance given by government officials in providing current scientific data, in assisting with the annual blood testing of the entire flock, in keeping breeding records, and in banding chicks as they emerge from the egg.

Although a dedicated poultry breeder at heart, Mr. De Zeeuw concedes that to stay in business in Canada today, the independent breeder must have a supplementary source of income. The 2- or 3-cent royalty available from selling premium breeding stock does not provide a sufficient profit margin to maintain breeding operations on the standards he demands. "This is actually a breeding farm," he says. "And the breeding should be the most important aspect. However, at the present time, financial returns from the sale of eggs are higher than from the breeding stock."

The reason for this, he says, is the highly competitive nature of the breeding business, which, like all other agricultural enterprises, is becoming increasingly integrated and dominated by corporate activity. "Unless the trend is reversed, the poultry business, within the next 10 years, will be entirely corporation-owned," he predicts.

But this should not unduly discourage qualified people from entering the field independently, he says. Breeding is a business for highly trained operators with substantial capital backing. Breeding cannot be done as a "sideline" or as a "hobby." But he says there is no reason why it can't be done as an integral part of a complete poultry operation. — Story and photos by Rachel Kilsdonk.

The farm is known for fresh eggs and shoppers drop in to buy some. Mrs. Otty Weber is in charge of these sales



Look at Intensive Farming

IT IS TIME to look toward more intensive rather than extensive farming. Dr. D. A. Rennie, head, Department of Soil Science, University of Saskatchewan, says that intensive production "within the available fencelines" is preferable to credit policies favoring farm unit expansion. He also advocates "serious consideration of changing grain delivery quotas"; and argues that intensified production, while it would "impart a potential for surplus production," also would have "a tremendous potential benefit for the individual farm unit and for the province as a whole."

Dr. Rennie says low income farm units, given "a measure of the right kind of help which will enable them to help themselves, should have an excellent chance of survival as income yielding enterprises."

Statistics which show that where the Canadian farm pioneer raised enough food for approximately four people, today's farmer produces enough food for approximately 31 people, had been "mooted as concrete evidence of a dramatic increase in efficiency of production," Dr. Rennie notes. Actually, "noth-

ing could be more misleading. All that has been happening is that our farms have been growing larger, and the larger farms have continued producing at approximately the same level as formerly," he states.

In an attempt to improve the level of farm income, pressures had been placed on governments at all levels to broaden farm credit policies so that farm unit expansion could be facilitated. A direct result of the increased flow of capital to enable the expansion of farm size had been rising land values. "The general policies favoring farm unit expansion at today's land values can readily be shown to be a hazardous and speculative solution for the dilemma that many of the farms today are facing," Dr. Rennie declares.

The alternative to expanding farm size as a means of obtaining an economic unit is to intensify production within the available fencelines. All available data suggested that "a dramatic upward adjustment in long-time average yields of cereal grains" is economically feasible. From 1952 to 1961, 15,000,000 acres of summerfallow land in Saskatchewan produced an average of 276,000,000

bu. of wheat per year. This production could "very readily" be increased to 390,000,000 bu.

Dr. Rennie contends that "perhaps a major obstacle" to intensification of production is that owners of less developed farms, in terms of size, by-pass intensification possibilities "because of lack of sufficient financing (and motivation) to buy fertilizers and so forth." A diversion of even a portion of the credit now earmarked for unit size expansion, to finance expansion within the fencelines, would go a long way toward overcoming this obstacle. A gradual withdrawal of credit for land purchases would, in the final analysis, encourage increased efficiency of production. V

Farm Incorporation

THINKING ABOUT incorporating your farm business? Dr. Glen Purnell, director of Alberta's Farm Economics Branch, warns that this step will not benefit every farm business.

The attractive feature of incorporation is the limited liability of the corporate business. This means that the shareholder can only lose the money he invested in the company. This is of little value to farmers who have all their assets invested in the business. Also, creditors usually ask for personal endorsement of loans so that a farmer's per-

sonal assets can be used to cover unpaid loans.

Tax savings are another reason for interest in incorporation. These savings are possible under present regulations; they could disappear if tax laws change. At present, tax savings do not occur unless taxable income exceeds \$10,000 per year. However, certain expenses can be claimed in a company profit and loss statement which cannot be included in a partnership or individual income tax statement.

Here are the advantages of incorporation:

- Farm business can continue smoothly in spite of ownership changes.

- Creditors may be more interested in lending to a company that has perpetual existence than a man with limited lifetime expectation.

- Creditors may be prepared to spread loans to corporations over a longer period than loans to individuals.

- An interest in the farm can be transferred through shares rather than the more complicated division and transfer of titles.

- Estates can be settled without breaking up the farm property.

There are also disadvantages. They are:

- Legal formalities and initial accounting costing \$300 to \$1,000 for

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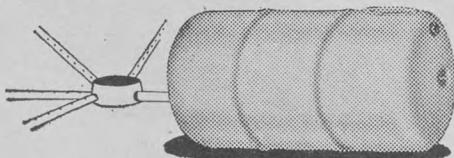
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incorporation of most family farm businesses.

- Accounts must be kept up to date.
- If the company is disbanded, similar legal formalities and accounting are required.
- Shares may be difficult to sell. Directors must consent to the sale and buyers may not be interested in minority shares. V

Minimum Farm Size

A MINIMUM net income of \$4,000 per year is what a young farmer must have to support a young family and meet reasonable debt charges, according to a panel on "Minimum Standards for Successful Farming," at the annual meeting of the New Brunswick Federation of Agriculture.

The panel discussed the size of farm needed to generate this income. The size depends on the type of operation. Some standards suggested are:

- Twenty-eight dairy cows producing 9,250 pounds of 3.8 per cent milk.
- Four thousand hens including replacements.
- Ninety acres of table stock potatoes.

The panel also suggested some combinations that were possible:

- Fifteen cows and 2,000 hens.
- Twenty-five cows (butterfat market) and 2,000 hens.
- Sixty acres of potatoes and 60 beef cows or 50 feeders.
- Twenty-two acres of orchard and 50 beef cows.
- Twenty-five cows (butterfat market) and 40 hogs. V

Marketing



[Guide photo]

A few moments before this picture was taken, this complete meal was in a bag in dry form. Food research made this miracle possible

Producers Have Stake in Food Research

IT IS NOT enough for farmers to produce their crops and their market livestock. They must also keep a wary eye on the consumer acceptance of the foods they produce.

There are many questions in the food business which must be answered. What makes a pea tough, or honey turbid? Why is some cottage cheese a taste treat which will keep well for 2 weeks or more? How do you make pasteurized cheddar cheese with the flavor of natural cheddar cheese? How do you control sprouting of potatoes and onions? How do you standardize the quality of potato flakes and maintain, in a wide range of foods, the flavor and color which will help them sell readily?

One organization that is helping to keep the Canadian food industry in a healthy competitive position in both domestic and foreign markets is the CDA Food Research Institute at Ottawa. It is probably best known for its work in the improvement of fruit and vegetable storage techniques and in the development of convenience foods, but the scope of the Institute is far wider than this. It affects what is produced and how it is processed. The Institute has an important role to play in the

preservation and extension of present markets; it also has the potential to create new markets for Canadian-grown crops and livestock products. V

Lower Wheat Prices

INCREASING world population will mean larger world markets for grain but may not mean higher prices, according to Dr. Laurel D. Loftsgard, agricultural economist with the North Dakota State College of Agriculture.

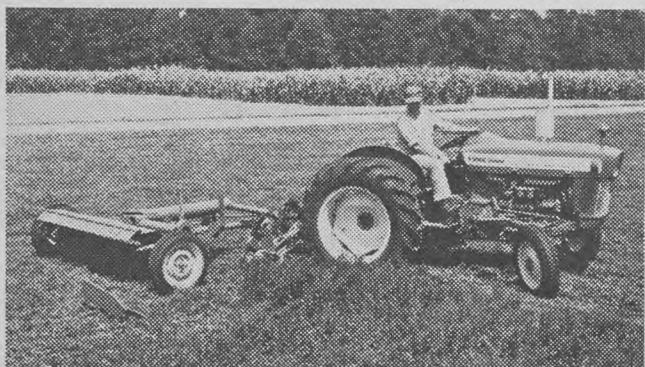
Populations of less developed countries are increasing faster than their capacity to increase food output but their ability to buy food may be decreasing. The substitution of wheat for rice in the diet of many countries will also increase the world demand for wheat.

North American farm production will have no trouble in supplying the increased market demands but will have to do so at either the same or lower world prices. Costs of farm production are expected to be of high importance in the future success of the farm operation. Dr. Loftsgard believes that profits will depend upon closer control of costs and more hard-headed management. V

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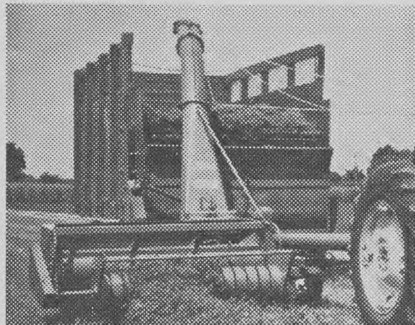
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Threat to Beekeepers

LACK OF CARE in the use of pesticides is taking a heavy toll of Ontario's tame bees and is driving beekeepers out of some cash crop districts. The result may be higher costs for fruit and vegetable growers who want to get a satisfactory pollination job done.

Prof. P. W. Burke of the Department of Apiculture, OAC, points out that honeybees play their most significant role by pollinating Ontario's \$22 million fruit and vegetable crop. Some 2,700 beekeepers operate 125,000 colonies in the province but losses from pesticides are hitting them hard.

One commercial beekeeper in Essex County, who operated some 700 colonies last year, lost 80 per cent of them — poisoned by aldrin that had been used to control grasshoppers and other insects on a tomato crop just before harvesting. The bees wouldn't normally work on the tomatoes — they probably picked up the poison from the dew.

This beekeeper and another in the district, who also suffered losses, moved out of Essex County. The loss of their bees creates a pollination problem for county farmers who had relied on them. The loss means these growers may have to

This disastrous loss to a hive was caused by careless use of pesticides



[ODA photo]

rent bees at pollination time in future years.

Beekeepers have had their bees poisoned in other areas too.

Sevin was used in a large orchard near Georgian Bay. At the time this insecticide was applied to the trees, the floor of the orchard was white with the bloom of ladino clover. Bees from several different apiaries were working on this clover and as a result were poisoned. Damage was even more widespread because some of the insecticide drifted from the place where it was used.

Prof. Burke says that the answer must be greater co-operation between beekeepers and those who are using insecticides.

He says that with few exceptions, dusts have been found more hazardous than sprays. Treatments by ground equipment have been less damaging than applications by aircraft. The treatment of large areas and the repeated use of pesticides has caused high losses.

Serious losses occur when crops, weeds and wild flowers that are attractive to bees, are in bloom at the time that insecticides are used. Worst losses of all have occurred when spraying is done during the daytime when bees are foraging.

Losses also occur when pesticides are applied on hot evenings as bees are clustered outside their colonies. In this latter case, the bees can be protected by covering the colonies with lightweight dark plastic tarpaulins for 1 or 2 hours during and after treatment. Colonies can't escape from sprays that are applied from the air and so non-porous covers are essential.

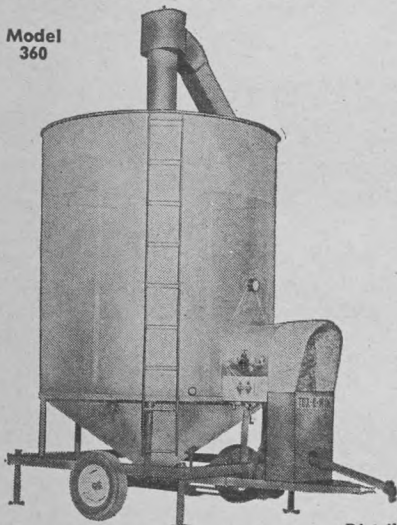
Prof. Burke says Ontario may have to adopt a system that is already in use in California. There, beekeepers who move colonies into any growing area must register with a local service which operates a warning system by telephone, letters and telegrams. Whenever a licensed pest control operator plans to apply pesticides or other material, he advises this warning service. This service then informs beekeepers and it is then their responsibility to remove colonies from areas to be sprayed. A lot of spraying is done after dark, even from aircraft, to reduce the drift of poison. As a result, the loss of honeybee colonies in California, where thousands of them are used for pollination work, has been reduced.

Prof. Burke says that whenever pesticides are going to be applied, beekeepers within a 2-mile radius should always be warned. V

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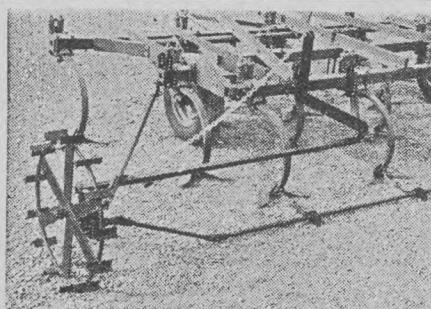
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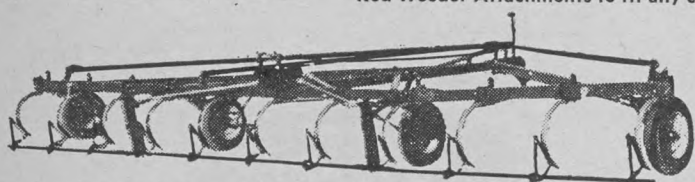
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Mechanical Thinning Cuts Peach Crop Costs

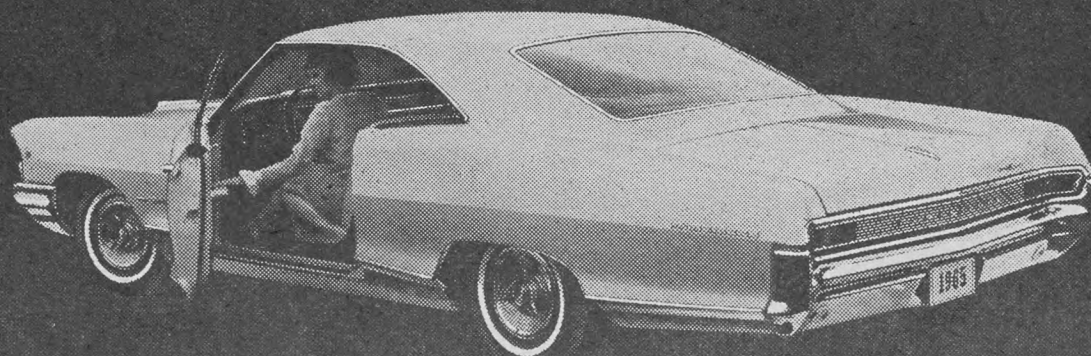
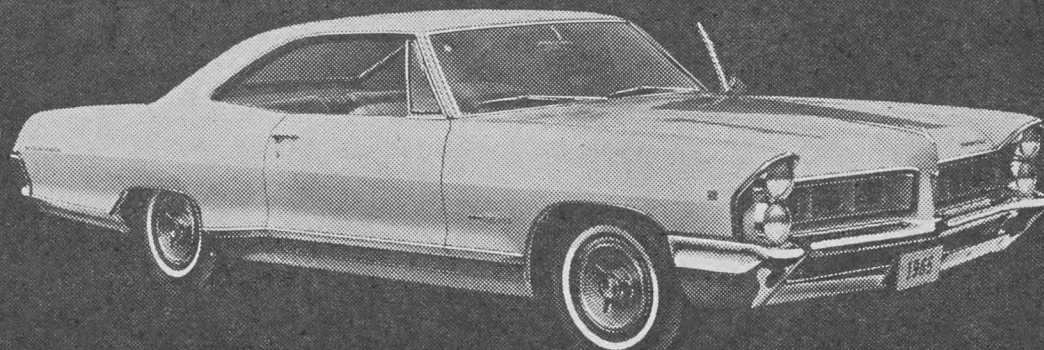
A MECHANICAL shaker to thin out and replace high-cost hand thinning of peaches is now being developed by Dr. D. V. Fisher of the CDA research station at Summerland, B.C. He's already successfully experimented with a shaker originally designed for harvesting sour cherries. Now he'll build one specifically for peaches.

In his tests, 15-year-old heavily set Veteran peach trees were thinned at June drop, 51 days past full bloom and when fruit diameters averaged 1½ inches. Follow-up thinning 7 days later completed the thinning job where shaking had proven inadequate. Results show that shake-thinning can save time.

For example, it took 74 man-minutes per tree to thin trees by hand and 29 minutes for shaker thinning (7 minutes plus follow-up

thinning of 22 minutes). When thinning was complete, an average of 20.2 per cent of the fruit remained on trees thinned entirely by hand; 17 per cent remained on trees which were shake-thinned. At harvest, fruit size averaged .242 and .247 pound respectively for hand-thinned and shake-thinned trees. The slight loss in total crop from shake thinning was more than offset by savings in thinning costs.

According to Dr. Fisher, the best growth stage for shake-thinning peaches has to be determined by trial every few days. Usually it's around 50 days from full bloom. If a grower plans to thin peaches by this method, trees should be short pruned for stiff-fruiting wood. Otherwise, the speed needed to thin long straggling branches overthins fruit on stiffer wood nearer the trunk. V



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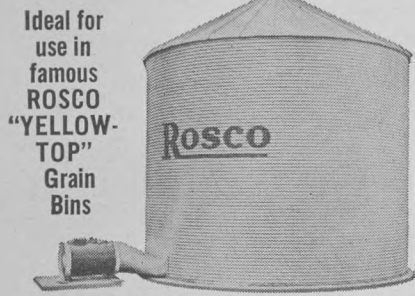
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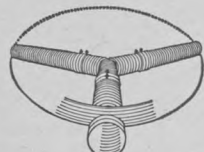


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Ten Steps to Forage Farming

HERE IS a forage program worth looking at.

Modern Ontario farmers have set themselves 10 goals in forage management. According to Douglas Parks, director of Agricultural Extension for the Ontario Department of Agriculture, these are:

1. To supply more of their livestock ration through better production and use of home-grown forages.
2. To get maximum yields with the most efficient use of fertilizers.
3. To use more stored feed throughout the year.
4. To use barn dryers to assist in harvesting better quality forage.
5. To make greater use of corn for maximum energy.
6. To use more single-species forage stands.
7. To seed forage stands directly without a nurse crop.
8. To make greater use of certified seed of the recommended varieties.

9. To renovate rough pasture with birdsfoot trefoil.
10. To develop greater interest in and use of soil and crop records.

Is the Plow Out of Date?

CHEMICAL tillage methods being studied by the Department of Engineering Science, Ontario Agricultural College, may result in the chemical sprayer replacing the plow in corn growing. This will give two advantages, according to Prof. D. E. Clark. Farmers will need less time to get seed into the ground and will be able to complete planting at the right time. Chemical tillage will reduce the danger of erosion during heavy rainfalls.

The problem with chemical tillage is to get the corn seeds to germinate and emerge regularly.

"We must find out what happens when we don't turn over the soil and the trash builds up on the soil surface," says Prof. Clark. "We do not yet have the best equipment for putting seed in the ground." ✓

Grant for Hay Shelter Promotion

THE SASKATCHEWAN Department of Agriculture will grant 15 per cent of construction costs up to a maximum of \$150 for one demonstration fodder storage structure for each rural municipality or local improvement district in the province. The local agricultural committee must designate a farmer to receive the grant by July 31, 1965. The policy is limited to the 1965 calendar year.

The policy was announced by Agriculture Minister A. H. Macdonald, who said "eligible costs will include building materials, construction work and specialized machinery, including conveyors used in silos or in hay shelters.

"Local agricultural committees are encouraged to promote the use of storage structures by selecting farmers who will build demonstration silos or shelters.

"If we are going to see our cattle industry develop and prosper, then we must grow more fodder crops and store larger reserves," said Mr. Macdonald. ✓

They Grew Record Wheat Crop

A thorough weed control program, plenty of fertilizer and timely irrigation put these farmers within an ace of 170 bushels per acre

THREE FARMERS at Quincy, Wash., broke the world's record for commercial wheat yield in 1964, coming within 2 bu. of 170 bu. per acre.

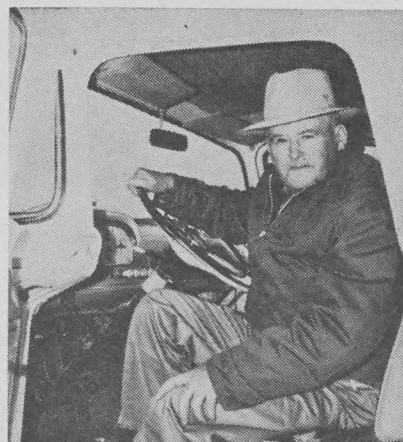
Elmer Yoshino and his brother harvested 169.9 bu. per acre from a 27-acre irrigated plot. Otis Helsley harvested 168.8 bu. per acre from a 26-acre irrigated field. The previous world's record was a yield of 155.5 bu. per acre from 11 acres in the same area.

Both the Yoshinos and Helsley followed a strict program of seed-bed preparation, planting, weed control, irrigation and fertilization.

To prepare for his 1964 wheat crop, Helsley had to re-level his land. Then in August, he plowed to a depth of 6 to 8 inches. Later, before planting, he prepared the ground with a disc, harrow and land plane.

Meanwhile, in October, the Yoshino brothers plowed and worked down immediately with a roller-harrow and then planted the wheat at the rate of 60 lb. of semi-dwarf Gaines wheat per acre. Their land was pre-irrigated once prior to the plowing and planting operation.

Helsley also pre-irrigated to assure good growing conditions, then on September 20, seeded at the rate of 55 lb. of Gaines per acre. He reduced weed population prior to planting by adding an extra pre-irrigation just after plowing to sprout the weeds, then tilling them down. No weed control was required on



Otis Helsley wasn't after a record, he wanted a profitable crop of wheat

the growing wheat because, as Helsley put it, "That wheat got so thick that weeds couldn't grow in it."

On Yoshino's acreage weeds were no problem at all. Good weed control management on the previous carrot crop eliminated weed problems.

The Yoshinos only needed nitrogen fertilizer because of the carry-over of phosphate in the soil from the carrot crop fertilizer program. They applied 150 lb. of nitrogen plowed down in the fall. In the spring they top-dressed with 70 lb. of nitrogen per acre.

Helsley made a plowdown application of 500 lb. of 8-24-0 in the fall. With this application, he added 4 lb. of actual zinc in the form of zinc sulfate to the soil. In the spring,

he top dressed his fields with 80 lb. of ammonium nitrate and 200 lb. of 8-24-0 solution per acre. Once irrigation was started in the spring, it was repeated frequently. Helsley irrigated 8 to 10 times during the growing season. He said that a lot of water is important for high yields with Gaines wheat.

Spring irrigation was delayed on both farms. The Yoshino brothers delayed their first spring watering until April 21 because, says Elmer Yoshino, "The wheat seems to quit stooling as soon as the first irrigation is put on." Afterward, the wheat was irrigated as often as required until it was in boot stage. The ground was kept damp until the crop was mature. ✓

Sawfly Increasing

THE WHEATSTEM SAWFLY is increasing in Alberta and Saskatchewan.

L. K. Peterson, entomologist at the CDA Research Station at Lethbridge, Alta., says hot, dry weather in recent years has favored the insect but not the parasite that infects it. At the same time, some farmers in the sawfly areas have switched from such resistant varieties as Rescue and Cypress to Thatcher and other hollow-stemmed wheats.

He points out that one infestation in the Vulcan-Carmangay area of Alberta has reached 25 per cent.

Farmers should check wheat fields for sawfly damage. Indications of infestation are green wheat stems with sawdust-like material inside and ripe stems cut off at the ground level. Mr. Peterson recommends that infested areas be planted to resistant wheats for 2 or 3 years. Early fall and spring tillage will kill overwintering larvae by drying out the stubble roots. ✓

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Standing Stubble Holds More Water

RECENT TRIALS show that up-right stubble can result in an extra 4 bushels of wheat in the next crop during dry years, says D. T. Anderson, agricultural engineer at the Canada Department of Agriculture Research Station, Lethbridge, Alta.

More moisture is conserved when stubble is not disturbed or, if it must be cultivated, bladed rather than chisel-plowed or one-way disced. The trial at the station showed that up-right stubble conserved $\frac{3}{8}$ inch, $\frac{3}{4}$ inch, and $1\frac{1}{2}$ inches more moisture during 3 dry years than stubble which was left partially or completely flat.

The second winter of the 3-year period was followed by 2 dry years. Fields which were in fallow during the first of these dry years, and had a good trash cover, retained an additional $\frac{1}{2}$ inch of water, which resulted in an extra 4 bushels of wheat the following year.

Cultivation after harvest may be needed for several reasons such as control of weeds or grasshoppers, conditioning of hard-to-manage soils and preventing run-off on sloping land. Whenever possible, use a method that leaves stubble erect to trap snow. This is good insurance for crop production, particularly during periods of drought. ✓

Irrigation Seepage Destroys Crop Land

MANY OF THE alkali and salinity problems that develop on irrigation projects are caused by canal seepage, according to K. Pohjakas of the Canada Department of Agriculture Experimental Farm at Swift Current, Sask. The seepage water raises the water table bringing up salts and

alkali to the soil surface. Many of the commercial crops grown on irrigation projects cannot tolerate these salts.

This seepage can be prevented in main supply canals by lining them with asphalt, concrete or plastic liners. Seepage from smaller ditches can be reduced by keeping the ditches free of weeds and by limiting the time when the ditches are full of water. The weeds back the water up in the ditch and the higher water level increases the seepage rate.

Leaky irrigation checks, drops, and gates add to the seepage problem. A small leak from an irrigation structure may not seem important but during a few days thousands of gallons of water will seep into adjoining land.

Few farm distribution ditches in Western Canada irrigation projects are lined because of the cost involved. However, the cost of lining will be returned several times through land conservation. ✓

Nitrogen Timing Important to Corn

TIME IS more important than method in applying nitrogen to corn, according to Dr. T. E. Bates, Soil Science Department, Ontario Agricultural College. Crops grow better when nitrogen is added at preplanting time or before corn is a foot high. If it is placed in the ground later, equipment used for application is apt to cut the crop roots.

Dr. Bates suggests several methods to fertilize corn. Phosphate and potash can be plowed down, and nitrogen applied separately or some nitrogen can be banded with the phosphate and potash. The three nutrients may also be plowed down together. ✓

Twice the Feed—from Corn



This corn silage supplies all the roughage needs of the Cochrane cattle

[Guide photo]

JIM COCHRANE of Russell, Man., has finished his search for a forage crop to supply winter roughage for 30 beef cows and 40 to 60 feeders.

Jim tried out corn in 1964 after 5 years of unsuccessful attempts to establish a forage crop on his farm. Twenty acres of corn provided enough silage to winter 30 head of cows. It also provided roughage for 24 heavy steers. A better than average sweet clover hay crop from the same acres in 1963, only lasted until early February.

Jim got these results in spite of two severe frosts on the corn. He credits his success to early seeding. The 20 acres were seeded by May 16. The crop was frozen back to the ground when 4 to 6 inches high, and frosted again in August. There were two varieties, Morden 88 and Rainbow Flint. The Morden 88 produced one cob per plant and these ripened in spite of the frost and short season. However, Rainbow Flint produced fewer cobs and they did not fill out.—R.F. ✓



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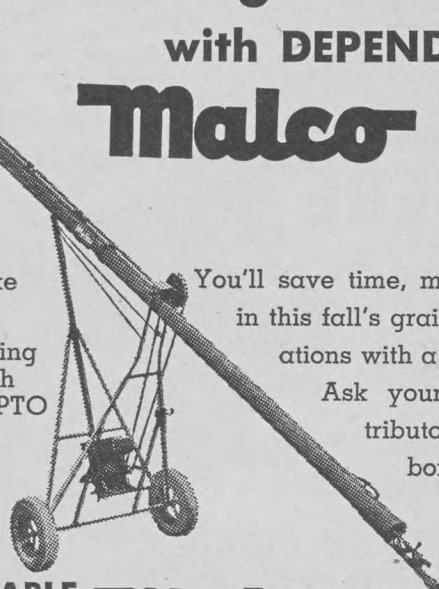
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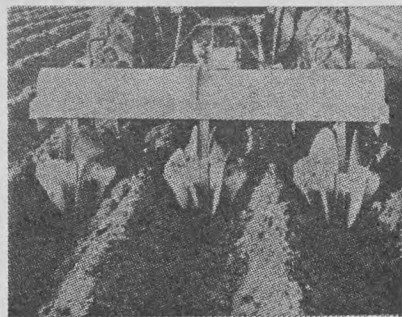
This was accomplished with a new healing substance (Bio-Dyne) which quickly helps heal injured cells and stimulates growth of new tissue.

Now Bio-Dyne is offered in ointment and suppository form called Preparation H. Ask for it at all drug stores—satisfaction or your money refunded.

Rotary Hiller

ENGLISH FARMERS may soon be ridging row crops with a rotary hilling device developed by the National Institute of Agricultural Engineering.

Each ridger consists of a right and left rotating helix that is chain-driven from the PTO. As the tractor moves forward, the rotors revolve



Rotary action moves soil without friction drag of shares and moldboards

at about 100 r.p.m., carrying earth upwards and out to form ridges.

This machine offers two advantages. The power requirement is much less than that of conventional machines so that ridging can be done at higher speeds. There is less compaction in the wheel furrows because the load on the rear wheels is reduced. V



"It's got 'quick starting' but no 'keep going'!"

Mechanics



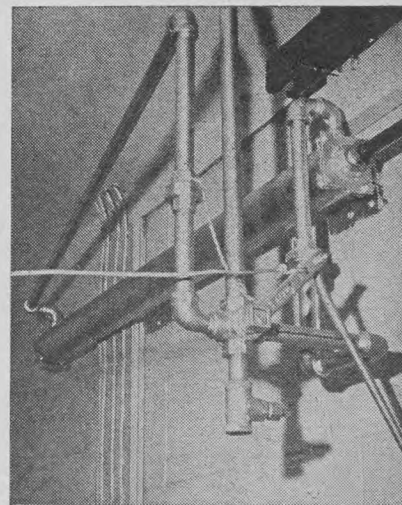
[Guide photos

Vacuum Operates Parlor Door

IF YOU HAVE ever operated a milking parlor you'll appreciate the refinements which the Turvey brothers of Embro, Ont., have included in their new milking parlor. Keith Turvey, who usually does the milking, gently pulls the trip wire and the door flies open. After a rapid glance in the mirror to see that a cow is safely through the doorway, the trip wire is released and the door closes automatically.

Keith Turvey knows that his time is most profitably spent in looking after the milking machines; any distractions reduce the milking efficiency. Regardless of his position in the four-stall saw-tooth parlor he is able to operate the door and also watch the cows come in.

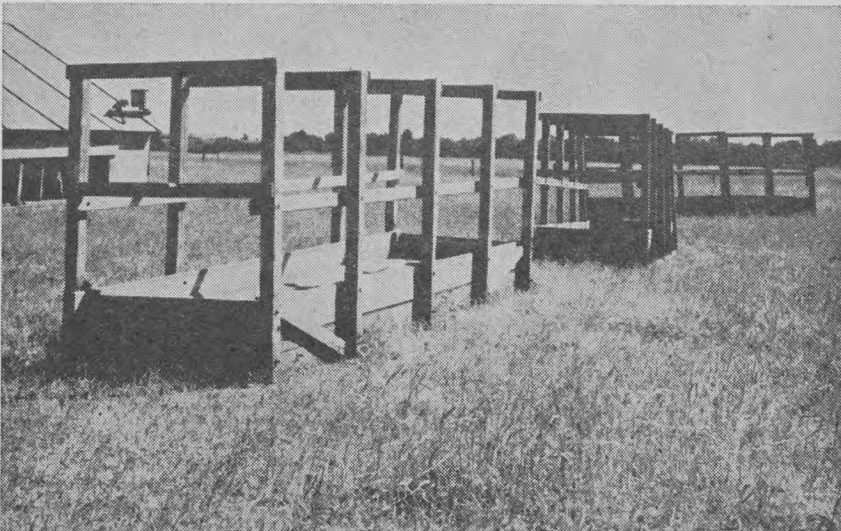
Here's how the door control works. A four-way valve is hooked up to the vacuum system. Below this valve is an air vent with an adjusting screw which can be altered to vary the opening and closing speed of the door. Half-inch piping is threaded into the sides of the four-way valve so that vacuum can be created at either end of the piston in the cylinder. The piston is connected to the door by a heavy rod. When the trip wire pulls the control lever to the left the door opens; when the trip wire is released a



The four-way valve is shown in the bottom center. The trip wire shows on the left, the spring on the right

spring returns the lever to the right and the door closes by vacuum. The four-way valve was purchased for \$19 and the rest of the mechanism was homemade. Total cost of the whole affair was some \$50. Very little vacuum is used for operating the door. In fact Turvey has detected no change in the vacuum level. When the vacuum pump is not in operation the door can be operated manually.—P.L. V

Feeders Ready to be Moved



[Guide photo

Mounted on skids, simple concentrate feeders on the J. B. Cross and Sons place near Okotoks, Alta., can be moved readily to any part of the ranch



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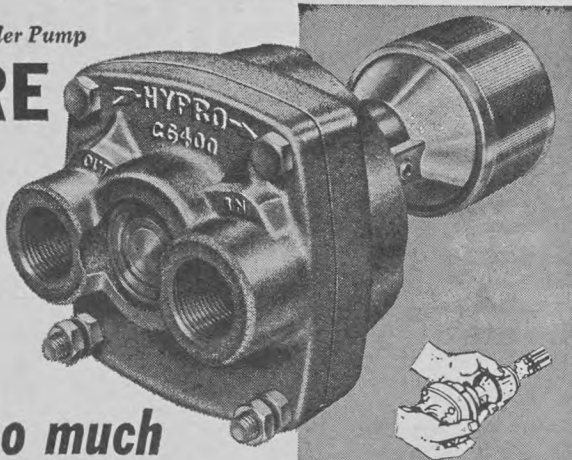
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June and July!

They are busy times for your elevator agent. About 30% of the prairie crop is delivered during these months and no self-respecting agent expects to work a regular day.

He cannot buy grain when the sun gets low (too hard to grade) so grain buying takes up most of the day. That leaves all the bookwork and grain cleaning for the evening.

A little rough on a man with a family but a good agent accepts it as part of his responsibility to you . . . since he knows you are busy. United Grain Growers is looking for more agents who have these three qualities:

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3. They must know the grain business really well.

We admit United Grain Growers does not have a monopoly on that kind of agent. There are plenty of them working for other companies—good competitive agents—who we would like to have working with us.

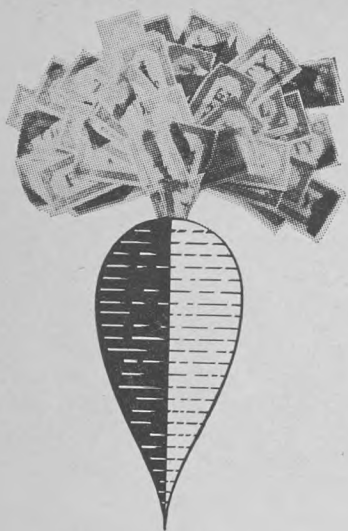
But United Grain Growers does have services and agent training programs that take second place to no company. New services such as a top-notch forage seed division (buying and selling) and the Grain Grower farm information service. New training programs such as the Basic Agent Training Program and Advanced Agent Training Programs (next winter we hope every U.G.G. agent will be able to tackle your toughest fertilizer questions).

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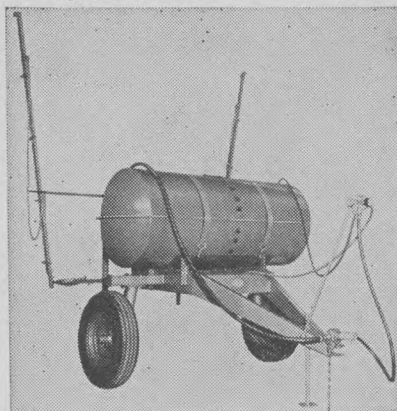


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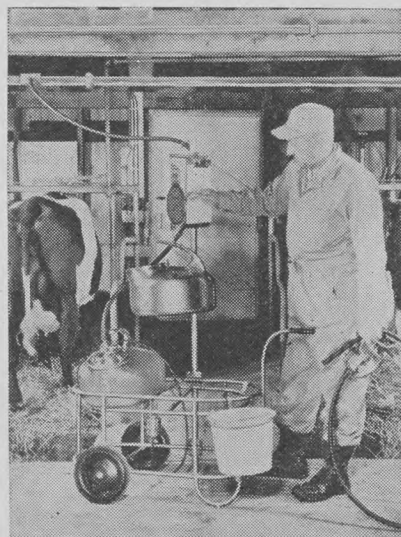
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Adjustable Width Sprayer



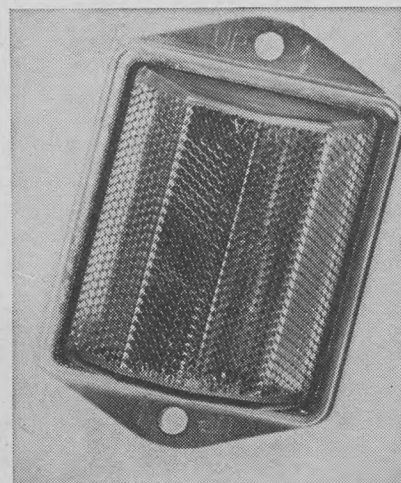
This trailer-mounted sprayer is adjustable to varying crop row widths. The nozzles are on flexible hose and can be fastened at varying distances along the boom to permit spraying rows of different spacing. (Hanson Equip. Co.) (539) ✓

Milking System



An automatic lid and tilting device, put on regular milker buckets, allows fast sanitary removal of the milk for piping from barn to bulk tank. The system can be had with glass or stainless steel pipes. (Babson Bros. Co.) (540) ✓

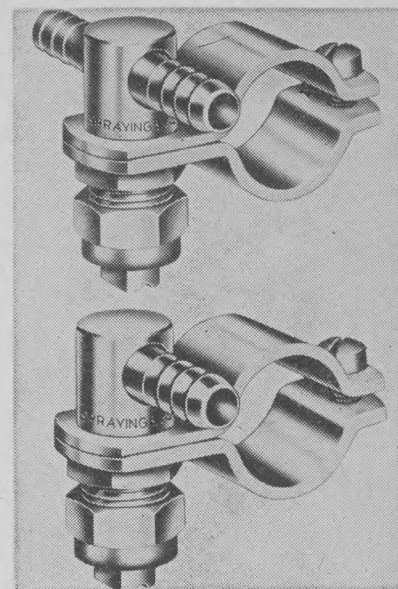
Multi-Surface Reflector



The lens surface of this reflector is designed to reflect light from a single source in every direction within 120 degrees. Circular models are designed to reflect light in all directions of a full circle. (AMT Corporation) (541) ✓

What's New

Adjustable Spacing Nozzle

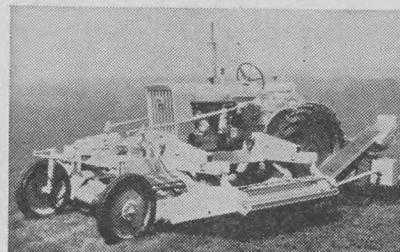


This nozzle is for spray rigs designed for adjustable spacing. The complete nozzle includes hose inlet connections and a plated steel circular clamp. Nozzles are connected by 3/8 in. I.D. hose and are held in position by the circular clamp. (John Brooks & Co.) (544) ✓

New Haying Machine

This machine is designed primarily for hay harvesting but will handle silage and haylage crops also. Teeth on the reel bars are intended to straighten tangled crop and to clear the knife, eliminating plugging. Straight through feeding does not need augers or drapers. (New Holland) (542) ✓

Pickle Harvester



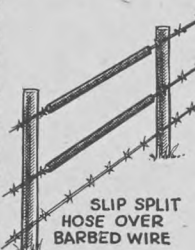
Said to pick with 90 per cent efficiency this pickle harvester is designed to fit on a standard high clearance tractor and to be adjustable for 4 to 6-ft. rows. Other features claimed are: stable roadability to 18 miles per hour, 8 ft. wide transport position, 4-hour tractor change-over and low maintenance costs. (Chisholm-Ryder) (543) ✓

For further information about any item mentioned in "What's New," write to WHAT'S NEW, Country Guide, 1760 Ellice Ave., Winnipeg 21, Man. Please quote the key number that is shown at the end of each item.

Workshop

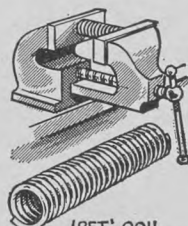
Barbed Wire Cover

Two pieces of rubber hose split and slipped over adjoining wires will provide an easy passage way through a barbed wire fence where a gate is not justified. — J.W., Alta. ✓



Coil Spring Replacement

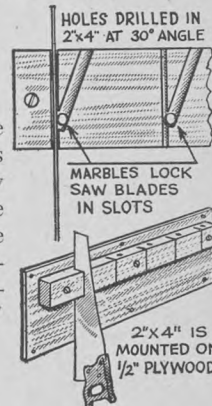
To replace a weakened coil spring with part of a longer spring, place the longer spring in a vise and compress the coils tightly a few times before cutting off the length needed. Compressing gives the replacement spring its "set" so it won't fail as quickly. — H.M., Fla. ✓



'SET' COIL
SPRING IN VISE BEFORE
CUTTING TO
DESIRED LENGTH

Hand Saw Rack

Hand saws are locked in this rack simply by slipping the blades into the slots and pulling downward. — J.A.W., Sask. ✓



Cleaning Oilstone



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STONE BY
RUBBING
ON SMOOTH
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A smooth concrete surface such as a sidewalk will clean the ordinary oilstone. You can quickly cut down the face of the stone by rubbing it on the concrete. — H.M., Pa. ✓



Illustrated by MANLY GELLER

THE STORM

by BRUCE M. FISHER

JOHNNY MATSON WAS PLUCKING the skin and fur from his ninth rabbit when the dry flakes of snow began to fall. His grin, as he dressed the animal and stowed it away, strongly hinted at a mental pat on the back.

Let it snow! He had rabbits enough! The early snow and cold snap had turned them white but the mild spell afterwards had betrayed them, exposing them to every hungry eye. With new snow falling, he was glad he had come.

The fallen leaves nearby whispered under a flurry of ice pellets and rustled impatiently with a stray puff of wind. The wind passed, the snow floated down, and silence fell upon the woods. The diminutive, plaintive notes of a chickadee, rising from the swamp, vanished as he turned to gaze upon the melancholy trees. Hoary with hanging filaments of moss, they seemed to have been there since the beginning of time.

Absently, he cleaned his pocket knife on a brown clump of fern. He should have helped his father with the wood. It was a big pile, slow and heavy work for a man alone. But, hang it, when did a fellow get such a chance

at the rabbits? Besides, after going to school all week, he was entitled to some time off. He put the knife, a gift from his father, in his jacket pocket.

Why hadn't they cut the wood last Saturday? Or the Saturday before? Why didn't they burn oil as everyone else did? Everything taken into account, oil was cheaper than wood and gave a far steadier heat. A lot of hardwood on the place didn't mean that they couldn't burn oil.

He pulled his gloves on, frowning. That spacing and thinning of trees was a waste of time; that planting in of evergreens was a crazy idea. Why, his father would be an old man before those tiny trees were big enough to cut.

Abruptly, he grabbed the pack and yanked the harness over his shoulders. He picked up the .22, rubbed its stock meditatively, and tucked it under his arm. It had been a present from his father last year when he was sixteen. He could still remember the happy light in his father's eyes, the ruddy good humor of his face.

What an argument they'd had this morning! How it had picked up in speed and force!

They'd both lost their tempers. Beyond this, he could only recall his father's blazing eyes and the wrathful words when the argument exploded: "Take that confounded gun and go!"

He had left, eagerly, with the snarling whine of the chain saw dwindling behind. And yet he could not shake the curious disquiet that crept upon him, that seeped in with the skinning of each rabbit. He only hoped that he hadn't used bad language but he wasn't too sure. He shrugged his shoulders, hefting the pack. He was glad he had come.

The strengthening wind and the waiting hush of the whitening forest brought a disturbing sense of isolation. What time could it be? Two? Three? He had no idea. Darkness came early in December. Home was over the hardwood ridge, almost two miles to the north. Twigs crackled underfoot as he started up the slope.

He couldn't expect his father to be jubilant over his success. So many rabbits would be almost a personal affront. Now if he'd gotten

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only one, his father would nod complacently and think: "Yes, he might just as well have stayed home to help with the wood." He wouldn't say it aloud but the feeling would be there and the morning more easily forgotten.

On the crest of the ridge, he pulled his cap down against the wind and stood staring across a valley at another ridge. He frowned. He didn't remember that one. He would have to get his bearings from its peak.

Minutes later, on a rugged, wind-swept hill where the miserable trees clung tenaciously to the thin soil, he peered through the driving snow. He must be too far to the west. Over there, on his right, the land appeared level and dense with evergreens. That must be the thrifty bush that his father prized so highly. Beyond it he would find the bush trail, the tail end of the farm lane. He worked his way down the steep slope and tramped across the low ground to the tree-covered plain.

In the calm of the denser woods, the snow fell dreamily, bemusing eye and brain. Drowsily confident of his whereabouts, he idled along. A rabbit bounced out before him and stopped, its one visible eye a button of black. Unthinking, he shot it, dressed it, and put it with the others. Ten. He didn't want any more. He shouldered the pack, took a few steps, and stopped.

Five yellow birch, so evenly spaced that human hand might have planted them, stood in perfect alignment. The unusual set of the trees roused his curiosity and he went forward to examine them more closely.

Years before, a gigantic yellow birch had fallen with the wind, had lain there, some of its roots still taking sustenance from the soil, until these five, its own branches, had taken root and were now growing, independent of the parent stem. The sight disturbed him. Why, he could not say.

He looked up at the five living trees and smiled with pleasure. Straight, slender, gleaming brightly golden in the gloom, youthful, beautiful, they demanded admiration. Even on this dull day, they had the glowing luster of sunshine. Behind them, a thicket of balsam fir set them off with its somber green.

Green and gold. Those were his school colors. His eyes were drawn down to the gray, dead giant beneath and his smile died away. A thought flicked into his mind and vanished. Before he could grasp it, it was gone, leaving him strangely discontent.

He swung away, hurrying, anxious to get to the bush trail. Silent minutes passed by. The snow was lodging on every branch, on every tree, changing the familiar world to a land of unreality, forcing him to seek accustomed things. He was intent upon the ferns wondering why some stayed green all winter, when he saw the tracks.

Realization came slowly. Someone else was in the woods, he thought. Whoever it was couldn't

be far away. Then he looked up and saw the five birches. Startled, he glanced around. Twenty feet away, lay the scattered fur and entrails of his tenth rabbit.

A sickly grin paled his face. He had traveled in a circle! He knew what happened to people who did that! Well, he wouldn't do it again. He marched away swinging the gun.

It took longer this time but, eventually, he was back at the birches, staring, sweating, breathing deeply, trying to quell the mad beating of his heart. He wasn't lost! Turned around maybe, but definitely not lost! He jiggled the burdening pack impatiently. He had to get going! But he must not circle any more; not any more.

He hastened away, lining one shrouded tree against another, determined to steer a straight course. Sooner or later, he would come out on the bush trail. Or somebody else's lane. In any event, he would come out somewhere.

The hill and the tree threw him off. He knew the hill should not be where it was but the tree on its summit, a lone, majestic spruce rearing itself against the elements, offered an opportunity to spy out the land. He removed his pack and laid the rifle down.

The wind was stronger now and wilder, the snow flying to the tune it piped, and the air becoming colder. He jumped for the lowest branch, hauled himself up and did not stop until he was in the upper boughs where the trunk was only inches thick.

A roaring gust buffeted the tree. Its great limbs lifted and writhed, it lurched violently back, its spreading plumes waving protest at the fury. It swayed forward, sighing, to meet the wind, its massive boughs dancing, and again reeled back in the tumult.

His arms were clasped about the trunk, his feet braced upon the sturdy limbs. Dizzy with motion, bewildered by wind and snow and heaving branches, he felt the sickening tinge of fear. Again the wind struck and he gasped aloud. He had

not expected this! He bit his lips and searched the storm-swept land through slitted eyes. He could see nothing but snow, falling snow, white snow far below, and swirling snow on every hand. Slowly, carefully, he descended and picked up his things.

Which way was home? Darn it! Which way was home? Lower lip trembling with frustration, he plunged down the slope. There was no telling the way. The bush was all the same, all a maze of gray and white, all shadowless gloom, a closed world caging him in. Rifle swinging, he hurried on, pushing aside branches, forcing his way through underbrush.

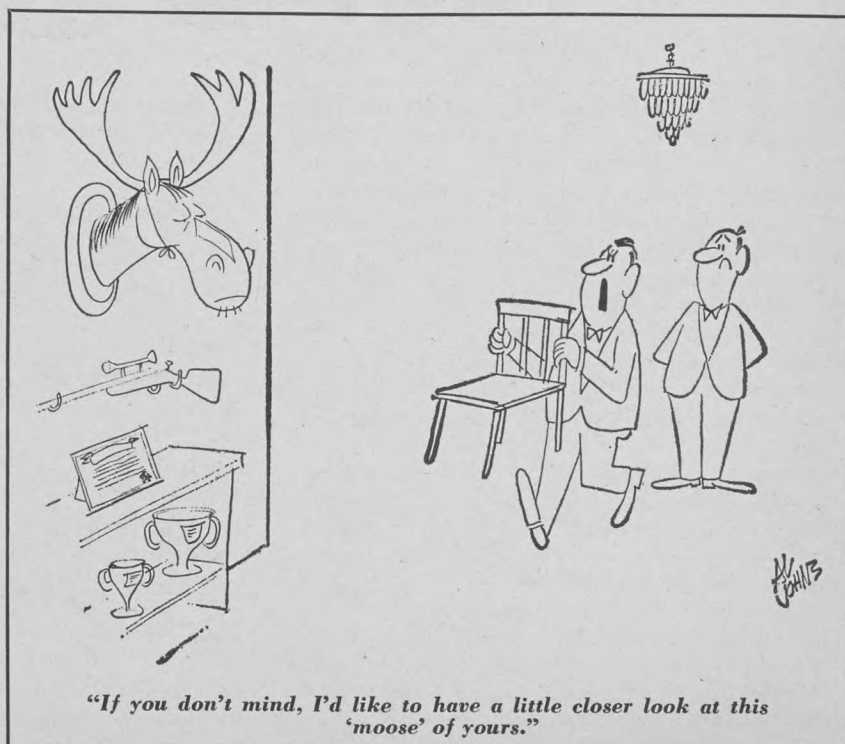
He wasn't lost! He wasn't! Every year, somebody got lost. But that was other people. It couldn't happen to him. Sometimes people got lost and were never found.

Lost! The thought brought its own desolation and horror. He was lost! A sob caught in his throat. He gasped, choked, sobbed, and could not stop. His mind dimmed as panic rode his brain. He was running when a low branch struck him full in the face and a freed twig stroked fire across his naked eyeball.

He swerved, staggered, and pitched forward with a jarring shock. He sat up, cupped a glove over his eye, and moaned softly with the pain. The tears gushed down one cheek and the warm flow felt like blood. He touched his eye and examined his fingertips warily, expecting to see a bright red smear and was almost offended when it did not show. He mopped the melting snow from his face and stood up, squinting to clear his sight.

What was he to do? He should have taken his father's compass but after his outburst that morning, he hadn't felt like taking it. Besides, the sun had been shining then. The morning. He must have used bad language. What else could rouse his father to such wild wrath?

Still, he had to get home, and soon. There was maybe an hour of daylight left. He must face the situ-



ation coolly, keep his head, use common sense. Somehow, he must find direction.

Direction? Among these ghostly trees, direction did not exist. Only silence did. The wind roaring overhead made it all the quieter here below. Quiet and snow. He shivered. He seemed to be the only living creature on the face of the earth.

HE BRUSHED the loose snow from his clothing and ran a finger under his jacket collar. How did pigeons find their way back to a distant loft? No one could explain their homing instinct. Perhaps, just perhaps, if he walked on with a questing mind, some sense of home might come to him.

It was good to be moving again, to feel the warmth generated by restless muscles. The gray trunks of trees marched by, the land rose, fell, and rose again; the fir gave way to white birch, the birch to bare, brown rock. On the windswept rock, he stopped, heedless of the hurtling snow. A curious tingling sensation ran down his body.

Home! It was straight that way. A mile or two, perhaps, but it was there! He knew it! His very soul was filled with certainty. Home. It was there.

Then the wind had changed.

The wind? What a fool he had been! The wind had been from the west this morning. It must still be from the west. No sky could become hazy, cloudy, and finally storm-filled without a constant wind to work it so. He could have been home long ago by simply keeping the wind on his left.

He paced the rock excitedly. But home was that way with the wind on his right! He knew it was!

He brought the gun across his stomach, gripping it by barrel and stock. His head bent down. Who was to say whether the wind had changed or not? Who was to say which was north and which was south? Here, where the sky met the ground and the range of visibility was less than a hundred yards, what meaning had north or south or east or west? Who was to say which was the right way home?

His head came up. He had left home with the wind on his right; he would go home with the wind on his left.

But home was that way, wasn't it? He backed away. He couldn't trust it; it might be a trick of the mind. He would keep the wind on his left. He wheeled away but where the birch met the fir, he stopped and looked back and realized, with a sense of loss, that the clear, intuitive sense of home was gone.

Tired and stiff with the weight of pack and gun and soggy clothing, he went slowly, steadily on. It would soon be dark. His mother would be getting supper ready and his father would be having a cup of coffee. Out of nowhere, the warm smell of oatmeal cookies came to him and he swallowed hungrily.

STUMBLING OVER the rough, deceitful ground, crouching, detouring, fending, ever keeping the wind

on his left, a mental weariness numbed his brain. With difficulty, he passed through a maze of alders, through a swamp where the down-sweeping wind snatched snow from the cedars and flung it in wild disorder across the land.

There was a long, wooded hill, an unfamiliar precipice, a valley, another hill, a stretch of level land, and over all, the unrelenting wind and snow.

He was ravenous. If he had a tin can now, he could boil some of the rabbit although it would be flat without salt. Salt? Did he have matches? He needed matches above all else. He stopped to search his pockets and placed a foot upon what looked like a snow-covered rock. His heart leaped. He scraped his foot sideways and felt the jagged tree-hinge of a stump. He looked up and saw, through the trees, the neat strip of a cutting. In the gathering dusk, he trudged down the lane of stumps, his trouser legs rasping. Thank the Lord, he had not gone that other way! Covered with snow, hungry, bone-weary, he didn't think he could walk another step.

He slogged across an open field. A gray barn rose out of the storm, a tattered skeleton of clattering boards and floundering tin. There was a house, its door idly flopping to and fro, its black and vacant windows sucking greedily at the fleeting snow. Hard on the wind, came the stale odor of smoke, the dull acrid smell of long-weathered soot. He plodded down the farm lane and turned right onto a narrow road, the wind still on his left. He had not the slightest idea of his whereabouts. The snow feathered before his scuffing boots.

His hands were nearly frozen and the pack seemed filled with lead. Had the wind changed? By resisting that insistent call, was he now miles away from home and going farther? He had never seen that abandoned farm before. Useless to question now. Just walk, walk. If the worst came, he could always retrace his steps and spend the night in the charred house. Darkness was coming on.

HE ALMOST WALKED into the signpost. He rocked back and forth, trembling with sudden relief. Mars Road! The Downey Road was immediately before him; less than two miles downwind was home and supper.

Twenty minutes later, he gratefully took the pack from his shoulders and laid it on the out-kitchen table. His mother was at the door, swift with questions. He brushed the snow from his boots and went inside.

"Did you get lost?" Her anxious eyes were searching.

His face was burning with the heat of the room. He looked at her. "No," he said. "I wasn't lost. Just got turned around a bit." And then, suddenly, "Where's Dad?"

"He's gone out to look for you."

To look for him! On a night like this! After their angry exchange that morning!

"He took the big spotlight," his mother said hurriedly, "Quick! Get

the deer gun! He said to fire it if you got home while he was away. You're to shoot over the tops of the trees so that he might hear the whine of the bullet. Hurry, now!"

He grabbed the heavy rifle, slapped the loaded clip into it, and went outside. He brought the gun up, worked the bolt, and fired three times, flinching from the slamming butt as he squeezed the trigger. Anxiously, he stared out into the night, shielding his eyes from the kitchen window's glow. Snow devils whirled up before him, dissolved, and streamed away to drift. The snow had stopped but under the clearing skies, the cold was more intense.

Again, he fired three shots, spacing them to cover more land. He waited, shivering. From far back, a pinpoint of light pierced the darkness, flickering off and on. Satisfied, he went into the house.

He laid the gun down slowly. "If I was him, I wouldn't have gone out looking for me," he said.

"Wouldn't you, John?"

"No," he said heedlessly. "I wouldn't."

His mother's smile disturbed him. There was an elusive quality to its tenderness that he could not understand.

"Oh yes you would," she said.

There was no answer to that. He looked down at the floor.

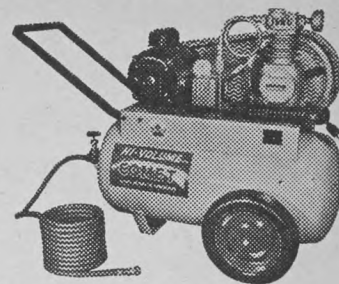
"Did Dad get all that wood cut?"

"No. He just cut enough for the week. He decided to leave it until next Saturday."

A vast relief filled his soul. He stood up, the better to warm his hands over the stove. He knew that his mother was watching him. He tipped his head back and drew his fingers lightly across his eyes as he had seen her do when she had a headache. A moment later he faced her, a tranquil grin just beginning to curve his lips.

"What's for supper, Mom?" he asked.

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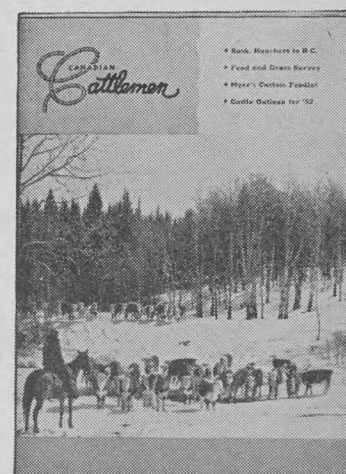
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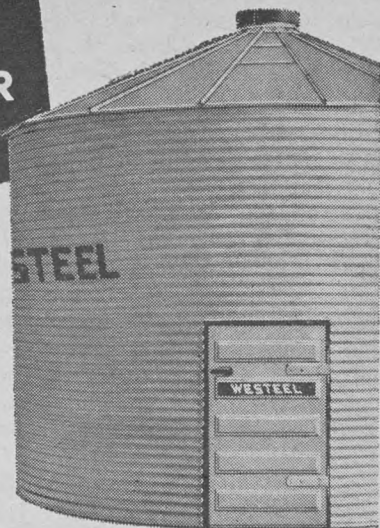
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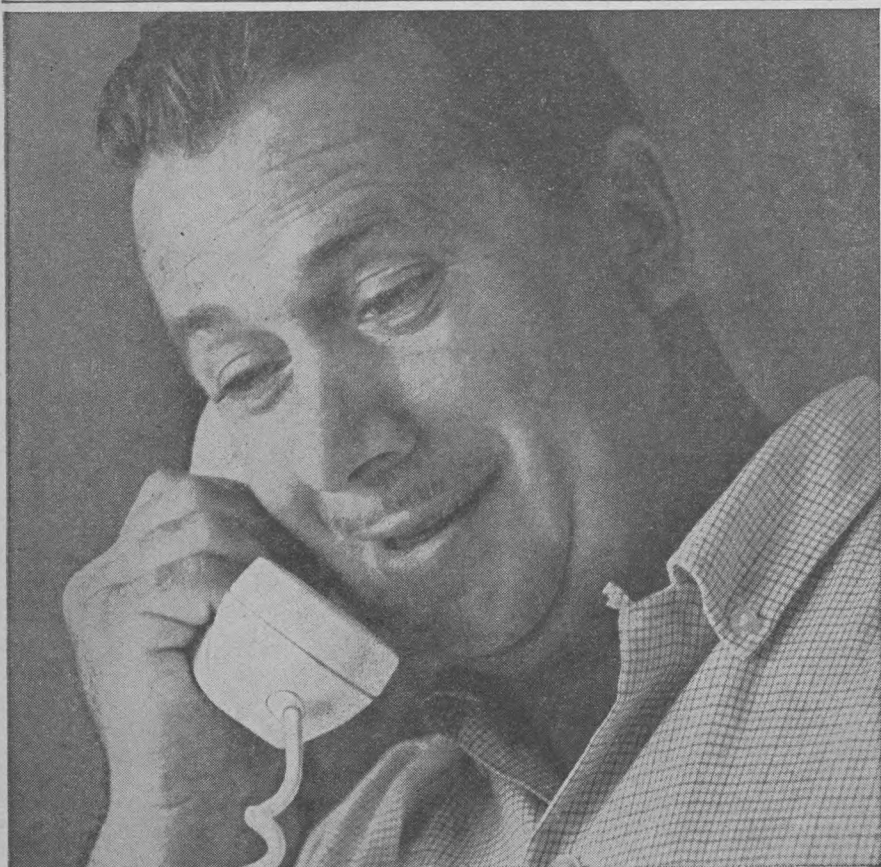
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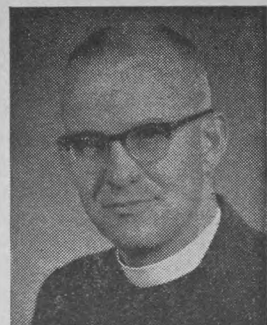
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SAVE—CALL BY NUMBER, STATION-TO-STATION, NIGHTS AFTER 6 OR ALL DAY SUNDAY

Let's Think It Over

by THE VERY REV. M. L. GOODMAN



More Than \$\$

Last month I had a birthday. A good many birthdays ago when I was a small boy I once tried to capitalize on the occasion. I told my playmates not to bother buying a present for my birthday party; being a practical 8-year-old I said — "just bring the money."

Unfortunately my mother heard about it, with results which I still remember. I got neither money, nor presents nor birthday party. Those were the days of a sterner discipline!

However, I needed to learn that money is not a satisfactory substitute for presents and from that I could come to understand that money is not a satisfactory substitute for people. I suppose we all need to learn this. In these prosperous days it is all too easy to give money when you should be giving yourself. Too often charity has been equated with writing a cheque. Cheques are essential and much appreciated, but they cannot discharge the whole of our responsibility on every occasion. We need to look for opportunities to give ourselves more directly.

I've heard of churches where more money comes in through the mail than through the collection plate. No doubt these are prosperous churches but there would be greater glory to God if all those folks brought their offering instead of just sending it.

Suggested Scripture: St. Luke X, 25-26.

A Weariness of the Flesh?

Along the top of the oak paneling in our college library there were some words in red and gold. They always helped me keep a sense of proportion as I struggled with my studies — "And further, by these, my son, be admonished: of making many books there is no end; and much study is a weariness of the flesh!"

The church itself has become involved in the business of making many books and indeed there seems no end to it. Of course there has always been a steady stream of educational, theological and devotional material, but never until recently, such a spate of books for "popular" reading. I suppose it all began with John Robinson's "Honest to God." This created a great sensation (to my mind, a greater sensation than it deserved). It was very widely read and discussed and "viewed with alarm." You may have heard the delightful story of the dignified English bishop who was seen reading "Lady Chatterley's Lover" on the train. When challenged he replied that he was not really reading that controversial novel at all, rather he was using it as a "cover" for "Honest to God"!

Here in Canada we were treated to "The Comfortable Pew" by Pierre Berton. There is now another book in somewhat the same vein — "Let God Go Free" by Ernest Harrison. Mr. Harrison wrote the preface for the Berton book. His own "Let God Go Free" deals with the issues more profoundly. In Winnipeg there has just been published an answer to Pierre Berton — "Just Think Mr. Berton" (a little harder) by Ted Byfield.

In March another of the churches came out with an Alice in Wonderland title — "Why the Sea Is Boiling Hot." This book includes essays by five different authors including the inevitable Mr. Berton. Of making many books...

Suggested Scripture: Romans XV, 4-7. St. Luke XXI, 29-33.

*Ecclesiastes XII, 12.

Woe Is Me!

To my mind, one of the most moving passages in the Bible is found in the sixth chapter of Isaiah. Here the prophet tells of his own calling to the service of God.

It was during the sixth year of the long reign of King Uzziah (Azariah) that Isaiah had an experience of the majesty and holiness of God. He is appalled by his own unworthiness and the unworthiness of his people. He cries out — "Woe is me! for I am undone; because I am a man of unclean lips, and I dwell in the midst of a people of unclean lips, for mine eyes have seen the King, the Lord of hosts."

Then in his vision Isaiah is cleansed by the touching of a live coal to his lips, with these words, "Lo, this hath touched thy lips; thine iniquity is taken away and thy sin purged." Later when the voice of the Lord calls, "Whom shall I send, and who will go for us?" Isaiah replies, "Here am I, send me."

These last few weeks many young men (and some older ones) have been "sent" out amongst God's people to minister to them in God's name. Each will be conscious of his unworthiness and inadequacy. Each will need your prayers and your active encouragement, where you have the opportunity to give it.

Suggested Scripture: I Timothy IV, 6-end. Isaiah VI.

June tryst

by BLANCHE M. KENNEDY

Across the field and down the pasture hill
Through fragrant bracken into cool green
shade,

The little footpath winds and beckons till
I follow it to the Enchanted Glade.
The sun shines there as though it loved the
place,

Through all the golden, murm'rous afternoons,
And as I lift the bars, with eager face
The happy child of lost, idyllic Junes
Emerges from the chrysalis of years

And comes to take my hand confidently.
By some sweet magic, adult cares and fears
Dissolve like mist until again I see

A smiling world of joy and summer sky.
Along the meadow, gay with buttercups,
We wander slowly, pausing now to mark
How daintily the gem-winged Satyr sups,
Or marvel as an upward-soaring lark
Pours forth his rapture like a silver rain.

We shade our eyes to trace his ardent flight
Till, from the blue, it show'rs to earth again—
Cascading cadences of pure delight.
With gentle care we part the hawthorne hedge
To see the tiny brown-bird on her nest;
By pleasant stages reach the river's edge
And throw ourselves beside the stream to rest,
And fashion daisy chaplets for our hair,
And pale-green chains from stems of
dandelion;

While comes with sweetness one can scarcely
bear,

The redolence of clover-blooms like wine
On every errant breeze that passes by.
Regarding us with bright-eyed, brave conceit
The crested waxwings, sleek as burnished
brass,

Feast royally where berries, wild and sweet
Like clustered rubies dot the emerald grass.
But soon the tinkling melody of cool
Clear water lures us from our velvet seat
Beneath the willow to the sun-flecked pool
Whose smooth brown stones are kind to
naked feet.

From underneath a ledge, small, speckled trout
File out in solemn curiosity,
To nibble at our ankles till we shout,
And slip and splash with noisy, laughing glee.
O happy childhood days forever gone,
O vernal haunts so green in memory,
Nostalgia keen as pain floods in upon
My heart today. Again there comes to me
With poignant pleading that I must deny,
The call of native fields and woods attuned;
As clear as though the intervening years
Had left no chasm like an open wound.
The lilting call of June is in my ears,
While faint, and fainter grows the city's din,
And through the shadows of this phantom
room,

More tangible than anything within,
There floats a breath of purple clover-bloom
As urgent and compelling as a cry.

Across the field and down the pasture hill,
Through fragrant bracken into cool, green
shade,
My unsure feet grow young, rememb'ring still
The little path to the Enchanted Glade.

Illustrated by EMILE LALIBERTE



Mrs. Consumer -- Victim or Villain?

UNWARY VICTIM or vicious villain — what role does the consumer play in the marketing of foods today? Has she protection from pesticide residues? from overpricing? Does her grocery spending make her Mrs. Boss in the food field?

When consumers meet with producers, manufacturers, distributors, and retailers, each learns something from the other and something about himself as well. And that was the purpose of the first western Canadian consumer-marketer conference held in April on the University of Saskatchewan campus in Saskatoon.

The theme address was "Foods of the Future." Dr. Nesbitt's comments are noted on page 11 of this issue. He told of the changes taking place in food marketing, and the implications these have for all of us — producer, processor, retailer and consumer. To the consumer, he promised more convenience foods, instant fruits and vegetables, more prepared foods to free the homemaker to devote more time to other roles as wife, mother, citizen and individual.

One homemaker doubted she'd live to enjoy this leisurely life. Mother's milk, she stated, had been found to contain higher levels of pesticide residues than were tolerated in cow's milk. "How well is the consumer protected from hazardous residues?" she asked.

"Without pesticides we might be short of food even in this land of surpluses," Dr. Nesbitt answered. "Work and money are being spent on the development of pesticides which are safe to people. But governments only act as the people dictate; complaints and requests for legislation should be made to legislators."

Is the Consumer Defenseless?

Just what protection has the consumer? A panel of experts attempted to answer delegates' questions.

Q. Is there adequate protection regarding the intake of vitamin D in vitamin preparations? in foods to which vitamin D is added?

A. Yes. A survey of all vitamin D preparations has just been completed. The recommended daily dosage has been reduced from 1,000 International Units to 400 I.U. because of some concern that some infants might suffer growth retardation from the larger dose. The Canada Food and Drug Directorate has felt that some vitamins were added to food unnecessarily, that persons on a balanced diet needed no supplementation. A new directive has been sent to the food industries involved. — *Miss Eleanor Ordway, chief, consumer division, Canada Food and Drug Directorate.*

Q. What is the possibility of standardizing food grading on a numerical scale: Canada No. 1, 2, 3, 4, etc., for all graded foods?

A. Canada's grading standards have long been established. Many product lines jealously guard their own grading terms. But standardization would certainly simplify the

grading inspector's job! — *Mr. John Kowal, retail inspector, Canada Department of Agriculture.*

Q. How is the public protected against salmonella contamination in foods?

A. An investigation of prepared mix products several years ago resulted in legislation prohibiting the sale of egg products and liquid eggs unless proven free of salmonella bacteria. — *Miss Ordway.*

A. The Canada Department of Agriculture set down maximum permitted levels of salmonella bacteria, and products are checked on a continuous basis. — *Mr. Kowal.*

Q. What types of testing are employed for the Chatelaine seal of approval?

A. Products submitted for testing are first sent to an independent laboratory. Secondly, the products are subjected to comparison testing with similar products on the market. Thirdly, unlabeled samples are sent to consumers for normal home use testing. In testing a food product, a tour is made of the production plant. — *Miss Carol Taylor, director, Seal of Approval, Chatelaine Institute.*

Q. Is excessive coloring added to margarine and meats?

A. Coloring added to margarine is not excessive in the sense of being hazardous to health. The Food and Drug Directorate controls the use of permitted colors, and these are constantly reviewed. The department is not aware of any coloring being added to meat. — *Miss Ordway.*

Q. To what extent does the Consumers Association of Canada speak for all consumers?

A. All Canadians are consumers, yet all do not belong to the association. However, CAC undertakes studies of products and marketing

practices and makes representation to industry and government on behalf of all consumers. — *Mrs. W. M. Auld, Manitoba president, CAC.*

Q. What use is the Better Business Bureau to the consumer? Does it only protect the business man?

A. The Better Business Bureau has no legal powers, but it does exert influence on businesses. The bureau does not protect any one segment of business or consumer group. It does recommend that consumers be cautious: investigate before you invest; know the representative and firm; read the contract before you sign. — *Mr. Bruce Brown, Edmonton Better Business Bureau.*

"From a Legal Point of View"

Prof. J. S. Ziegel, College of Law, University of Saskatchewan, surprised his audience by saying that it's not a case of "let the buyer beware" (*caveat emptor*) at all. In many cases, it's the merchant who should be wary. He may be sued!

He said, however, that the range of consumer legislation is still extremely limited at the federal level, and only slightly less so at provincial levels. Most consumer protective legislation pertains to foods and drugs.

Where might the consumer with a grievance look for satisfaction? The provincial statutes of all common law provinces in Canada include a section called the Sale of Goods Act. This Act recognizes an implied condition that goods delivered under contract must live up to their description. The goods are also required to be merchantable, that is, fit for resale and fit for normal use. But the quality of normal use is very inexact stated in law, Prof. Ziegel warned. The condition that goods must be fit for the use for which they are sold requires that

the consumer make clear for what purposes he is purchasing the goods, and make the purchase from an outlet which normally deals in those goods.

The above conditions allow recourse for consumer against merchant. Another section in law, called Actions in Tort, permits suit against the manufacturer. The issue here is "a wrongful act or intention to act which results in harm to person or property." Increasing allergic sensitivities have given rise to a growing number of suits of this type, Prof. Ziegel reported. Because of this, large concerns carry product liability insurance protection.

To Market, to Market

Fresh produce displays in retail grocery outlets bring the foods of many countries to the hand of the Canadian grocery shopper. Ken Todd, zone manager for Scott Fruit Company in Winnipeg, told conference delegates how his wholesale firm purchases Mexican tomatoes, cucumbers, eggplant and corn; lettuce from California and Arizona; bananas from Ecuador; melons from Gulf of Mexico coastal states; onions from Chile; oranges from Australia and Israel. Fairly constant supplies, transported quickly, have nearly eliminated seasons in the marketing of fresh fruit and vegetables. And these are important items in the retail grocery trade.

The produce area is a traffic builder, Mr. Todd said, a glamorous area in the grocery store where much of the spending is done on impulse. The retail store plans a gross profit margin of 20 to 25 per cent each week on fresh produce, with a produce goal of 10 to 20 per cent dollar volume of all food sales.

Improved packaging materials and techniques, and the wrapping of fresh vegetables such as cauliflower and cabbage as close as possible to the growing field, bring produce to market in better condition. Trimming before shipping cuts freight costs, so the consumer buys more cheaply too.

Some packaging is done by the wholesaler, providing retail convenience but adding to wholesaling costs. Still, the wholesaler knows his costs and has a somewhat better chance of getting back the 10 per cent he needs to run his business than has the retailer, especially on perishable produce. Mr. Todd used the following figures to illustrate the wholesaler's role.

A grower receives \$3.50 for a 75-lb. sack of potatoes. To the wholesaler, this represents 7 10-lb. lots each costing 50¢. Bags and master container cost him 5¼¢. Labor costs 3¼¢. Overhead charges are 1½¢. The wholesale price, then, is 60¢ plus 10 per cent (6¢) for a total of 66¢ per 10-lb. bag. This bag retails at 98¢, or possibly 79¢ on special offer.

Consumers prefer certain prices, Mr. Todd reported. Most popular single item price is 39¢ each.

(Please turn to page 50)



Comarc was the name given the first prairie consumer-marketer conference



Fred Bulger built the attractive stone railings to draw visitors to the front entrance. Most of the stone came from within the district

[Guide photos



From the corner windows in their bedroom the Bulgers can look out upon the combination rock garden and patio (another of Fred's projects) plus a conventional garden of unusual beauty. It is full of bird song all summer long

A Family Meets Here

WHEN THEIR FOUR CHILDREN, the grandchildren and great-grandchildren visit Elsie May and Fred Bulger at their Bassano, Alta., farm home, there's more than enough room for everybody. Elsie May saw to that when she and Fred decided to remodel and enlarge their old house with its high ceilings and hip roof.

Elsie May redesigned the house herself (the changes actually were made directly from her plans); and Fred did a lot of the interior finishing himself with the help of a couple of carpenters. He also put in the decorative rock railings on either side of the front door and the combination rock garden and patio at the rear of the house. "I only wish I'd had this house when I was cooking for a threshing gang," Elsie May says. Its unusual features tell something of the Bulgers' individual talents in design.

For example, there's the combination studio-office, the massive fireplace that contains some 22 tons of field stone, the built-in cupboards (some of which were featured in *Country Guide*, February 1965). Ceiling-high book shelves line one corner of the 22- by 20-foot living room and there's a glass brick wall in the bathroom adjoining the main floor master bedroom. The house even has a complete fall-out shelter that has found a more pleasant use as what Elsie May and Fred laughingly call the "pool" room; they keep a billiard table there.

The Bulgers, dryland farmers in an irrigated area, have farmed here ever since they came to the district years ago. Most of the stone they've used to beautify the farmstead they've found around the farm. Now, of course, they are semi-retired. They did keep some acreage and cattle but a large part of the original farm is rented out to a son and grandson. The rest is range land. Fred thought he'd have lots of spare time this way but he says he is still "puttering" around.

And how do he and Elsie May putter? Elsie May paints — in a vigorous, primitive style. One of many examples of her work is the large mural in the living room which interprets her thoughts concerning the first road across Canada. One hangs in the permanent collection of Calgary's Allied Arts Center. She's also the farm accountant because Fred doesn't like what he calls the "book work."

But when she is painting, Fred, a rockhound, is likely to be down in his basement workshop cutting and polishing some of his better finds. Last summer, however, he was busy building a 3-foot-high rock fence across the front lawn.

The Bulgers haven't always lived the pleasant life they're living now. With others they weathered the "dirty thirties," lost horses and barn by fire, had their share of illness, watched crops wither and waste. But they followed one rule, even in the difficult times. They always waited until they could pay cash for the things they needed because, as Elsie May explains it, it "costs twice as much to finance them." They paid for the house renovations the same way. Now the Bulgers are content to enjoy their big, beautiful home at the end of the tree-lined driveway that's a landmark in the Bassano district. V

by

**ELVA
FLETCHER**

Home Editor



When redesigning their home, Elsie May made provision for a combined studio-office. The west end is studio, the east end farm office (above). Stairs from the living room lead up to it



The exterior of the Bulger home at Bassano, Alta. Its spacious lawns, and the variety of trees, flowers and shrubs around it make it a district showplace

BAKE A SURPRISE

A
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Something
for
Someone
Special



What could be more deliciously tempting than hot buttered slices of Cherry Puff Loaf? A golden crusted loaf lightly flavoured with the tang of cherries and topped with creamy frosted icing... so distinctive... and so good tasting. If you have someone special who loves surprises try this easy recipe for Cherry Puff Loaves.

Cherry Puff Loaves

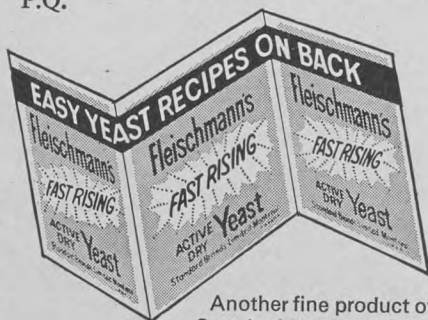
Scald 1 cup milk. Stir in $\frac{1}{3}$ cup granulated sugar, $\frac{1}{2}$ cup Blue Bonnet Margarine and 1 tsp. salt. Cool to lukewarm. Meantime, measure into a bowl $\frac{1}{2}$ cup lukewarm water. Stir in 1 tsp. granulated sugar. Sprinkle with contents of 1 envelope Fleischmann's Fast-Rising Dry Yeast. Let stand 10 mins. THEN stir well.

Stir in lukewarm milk mixture and 2 well-beaten eggs. Coat 1 cup chopped glace cherries with 1 cup pre-sifted all purpose flour. Add to yeast mixture with 2 cups more flour. Beat until smooth. Work in additional flour to make a soft dough (about 2 cups). Turn out on lightly floured board; knead until smooth and elastic. Place in greased bowl; grease top. Cover. Let rise in a warm place, free from draft, until doubled in bulk, about 1 hour.

Punch down dough. Turn onto lightly floured board; divide in three equal pieces. Shape each piece into a ball and place in 3 greased 1-pound coffee tins. Cover. Let rise as before about $1\frac{1}{2}$ hours. Bake in preheated moderate oven (350°F) for 35 to 40 mins. Makes 3 loaves.

Frost tops with thick confectioners' icing. Your Cherry Puff Loaves will rise up light and tasty because of Fleischmann's high rising yeast. Use Fleischmann's in all your home baking for wonderful results every time.

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Celebrate Father's Day by serving a taste-tempting refrigerator cheese cake

Milk Masquerades

NOT TOO MANY years ago, the number of dairy products which appeared on a farm family's meal table depended directly on the farm wife's skills. Prior to 1873 all butter was churned on the farm. And even after the first cheese factory opened in 1864, many farm families met their own needs.

Today's homemaker chooses from an ever-lengthening parade of dairy products, processed and packaged outside the farm home.

June is Dairy Month in Canada—an appropriate time to sample your way through dairy product counters. One day of this month belongs to dad. Why not treat the family to a sumptuous cheese cake in his honor?

Canada means cheddar to a growing number of cheese eaters in other lands. Grate some to use with creamed tuna and garden asparagus in a broiled supper sandwich.

Savory cheese squares combine process cheese and butter with flavorings in a spread that's broiled on bread cubes.

Refrigerator Cheese Cake

- 2 T. melted butter
- 1 T. sugar
- $\frac{1}{4}$ c. finely chopped nuts
- $\frac{1}{4}$ c. graham wafer crumbs
- $\frac{1}{4}$ tsp. cinnamon
- $\frac{1}{4}$ tsp. nutmeg
- 2 envelopes unflavored gelatin
- 1 c. sugar
- $\frac{1}{4}$ tsp. salt
- 2 eggs, separated
- 1 c. milk
- 1 tsp. grated lemon rind
- 3 c. creamed cottage cheese (three 8-oz. cartons)
- 1 T. lemon juice
- 1 tsp. vanilla
- 1 c. whipping cream, whipped

Line bottom of 8" spring form pan or one 8" or 9" sq. with waxed paper.

Combine melted butter, 1 tablespoon sugar, nuts, crumbs and spices. Press crumb mixture on bottom of paper-lined pan.

Combine gelatin, $\frac{3}{4}$ cup of the sugar, and the salt in top of double boiler. Beat egg yolks and milk together; add to gelatin mixture. Cook over boiling water, stirring constantly, until gelatin dissolves and mixture thickens (about 10 minutes). Remove from heat. Add lemon rind. Cool. Press cottage cheese

through sieve, then stir into cooled gelatin mixture. Stir in lemon juice and vanilla. Chill, stirring occasionally, until mixture mounds slightly when dropped from a spoon. Beat egg whites stiff, but not dry. Gradually add remaining $\frac{1}{4}$ cup sugar and beat until very stiff. Fold beaten egg whites and whipped cream into gelatin mixture. Turn into prepared pan and chill until firm. Invert on serving plate and carefully remove waxed paper. Garnish with maraschino cherries, if desired. Yields 10 to 12 servings.

Savory Cheese Squares

- 1 lb. process cheese
- $\frac{1}{3}$ c. butter
- 2 T. mayonnaise
- 3 T. finely chopped green pepper
- Bacon slices, cut in squares
- 1 loaf unsliced bread

Preheat oven to 350°F. (moderate). Line cookie sheet with foil.

Soften cheese; add butter, mayonnaise and green pepper. Cut crusts from unsliced bread. Slice bread in 2" slices, then cut each slice in 4 squares.

Partially cook bacon pieces. Spread top and sides of bread squares with cheese mixture and place on prepared cookie sheet. Top each square with a piece of partially cooked bacon. Bake 10 to 15 minutes.

Broiled Cheese, Tuna and Asparagus Sandwiches

- 1 lb. asparagus
- 7-oz. can tuna
- 2 T. oil from tuna, or 2 T. melted butter
- 3 T. flour
- 1 c. evaporated milk
- $\frac{1}{3}$ c. asparagus liquid
- $\frac{1}{4}$ tsp. salt
- Pepper
- 6 slices bread
- 1 c. grated cheddar cheese ($\frac{1}{4}$ lb.)

Cook asparagus; drain, saving $\frac{1}{3}$ cup of the liquid. Drain oil from tuna and flake fish. Blend 2 tablespoons tuna oil or melted butter with flour in top of double boiler. Stir in milk gradually. Add asparagus liquid and cook over hot water, stirring constantly, until thickened. Add tuna and seasonings. Blend thoroughly. Toast bread slices on one side. Place in a shallow baking or broiler pan. Arrange drained asparagus spears on untoasted top of bread slices and spoon creamed tuna over top. Sprinkle with cheese. Broil about 5 inches from heat until lightly browned (about 5 minutes). Yields 6 sandwiches.—G.L.

Preserves are Precious

THE FRUITS at hand are more precious than ever this preserving season. Spokesmen tell us there will be no apricots, no peaches, only 15 per cent of the normal cherry crop, few pears and fewer apples from the fruit growers in British Columbia. In areas normally supplied by B.C., jam and jelly makers share the growers' sorrow over the severe winter's results.

To make the most of the fruits which are available for jam and jelly, remember to read your recipe, measure carefully, and work with small amounts at a time. And for safety's sake, **DO** melt paraffin over hot water, **NEVER** OVER DIRECT HEAT.

Raspberry Gelatin Jam

- 5 c. crushed raspberries
- 3 c. sugar
- 1 pkg. black raspberry flavored jelly powder

Wash, crush, and measure raspberries. Cook slowly with the sugar, stirring to prevent scorching, to jam stage (225°F. on candy thermometer). Add jelly powder and stir until dissolved. Ladle into sterilized jam jars. Seal jam with melted paraffin. Yields 5 cups of jam.

Rhubarb Marmalade

- 1 orange
- 1 lemon
- $\frac{3}{4}$ c. water
- $\frac{1}{8}$ tsp. baking soda
- 1 lb. red-stalked rhubarb (8 to 10 stalks)
- 6 c. sugar
- $\frac{1}{2}$ bottle liquid fruit pectin
- Few drops red food coloring (optional)

Remove skins in quarters from orange and lemon. Lay quarters flat; shave off and discard about half of white part. With a sharp knife or scissors, slice remaining rind very fine. (Rind may be chopped or ground if preferred.) Place in saucepan; add water and soda. Bring to a boil and simmer, covered, 10 minutes, stirring occasionally. Section or chop peeled orange and lemon; discard seeds. Add

pulp and juice to undrained cooked rind and simmer, covered, 20 minutes longer. Wash rhubarb and slice thinly or chop. Combine with cooked fruit, then measure $3\frac{1}{2}$ cups into a very large saucepan.

Add sugar to fruit; mix well. Bring to a full rolling boil over high heat, and boil hard 1 minute, stirring constantly. Remove from heat and at once stir in half bottle liquid fruit pectin. Skim off foam with metal spoon. If desired, add a few drops of red food coloring. Stir and skim by turns for 5 minutes to cool slightly, to prevent floating fruit. Ladle quickly into sterilized glasses and cover at once with $\frac{1}{8}$ " hot paraffin. Yields about 8 medium glasses marmalade.

Raspberry-Rhubarb Jelly

- 4 c. mixed fruit juice (about 1 qt. ripe, red raspberries and $2\frac{1}{2}$ lb. rhubarb)
- 7 c. sugar
- 1 bottle liquid fruit pectin

Crush about 1 quart fully ripe red raspberries. Cut rhubarb in 1" pieces. Place fruits in jelly cloth or bag and squeeze out juice. Measure 4 cups juice into a very large saucepan.

Add sugar to juice and mix well. Bring to a boil over high heat, stirring constantly. At once stir in liquid pectin. Bring to a full rolling boil and boil hard 1 minute, stirring constantly. Remove from heat, skim off foam with a metal spoon, and pour quickly into hot, sterilized jelly glasses. Cover at once with $\frac{1}{8}$ " hot paraffin. Yields about 12 medium glasses jelly.

Jewel Jam

- 6 c. cherries, pitted
- 4 c. gooseberries
- 8 c. sugar
- 4 c. raspberries
- 4 c. red currants

Top and tail gooseberries and red currants. Combine with other prepared fruit in preserving kettle, crushing fruit slightly. Bring to a boil, and boil, uncovered, about 15 minutes. Add sugar. Bring to boil again, stirring until sugar is dissolved; boil 12 minutes. Seal in hot, sterilized jars. Yields 10 cups jam.



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"Make More"
time!

Scraping bottom? Homemade jam is a favourite with everybody—and when you make it with Certo it tastes even *better*. Certo's fast jelling 1-minute boil is the answer: It guarantees fresh fruit flavour... natural colour... and up to 50% more jam. (Jelly too!) And success is sure—every time you use Certo.



Preserve fresh strawberries while they are in season... enjoy them all year 'round. Easy recipes for all preserving fruits come with Certo Liquid or Crystals.



Jams, jellies and marmalades preserve summer's fruits for winter pleasure

(Continued from page 46)

Does the Consumer Get What She Deserves?

Mrs. A. F. W. Plumptre, president, Consumers Association of Canada, says consumers resent manufacturers who add vitamins as a sales gimmick, rather than because they're necessary to health. She resents underfilled containers, and advertising appeals to children.

But as spokeswoman for con-

sumers, Mrs. Plumptre admitted consumers needed to look to their own ethics too. She cited thoughtless bruising of fresh produce, sampling of products offered for sale in glass jars, the return of goods purchased carelessly, and shoplifting as shameful consumer practices.

Rudy Toupin, Storthoaks, Sask., merchant, spoke for retailers. "The small general merchant is the mirror of the community in which he resides," he maintained. "The relationship between merchant and community is based on integrity of merchandise, his personal guarantee of satisfaction, and his role in community affairs. Consumers get the kind of ethical conduct from business that they deserve, because business ethics reflect community standards."

Representing the distributor in the marketing process, Mr. A. Gascoigne, director of marketing, Federated Co-operatives, said, "Gimmicks must in the end increase the cost to the consumer. But the toys, towels, etc., are already in the package by the time it reaches the distributor; the promotional campaigns are underway. The distributor can only refuse to handle the products and argue for price reductions in lieu of the volume sales awards offered to him as a distributor."

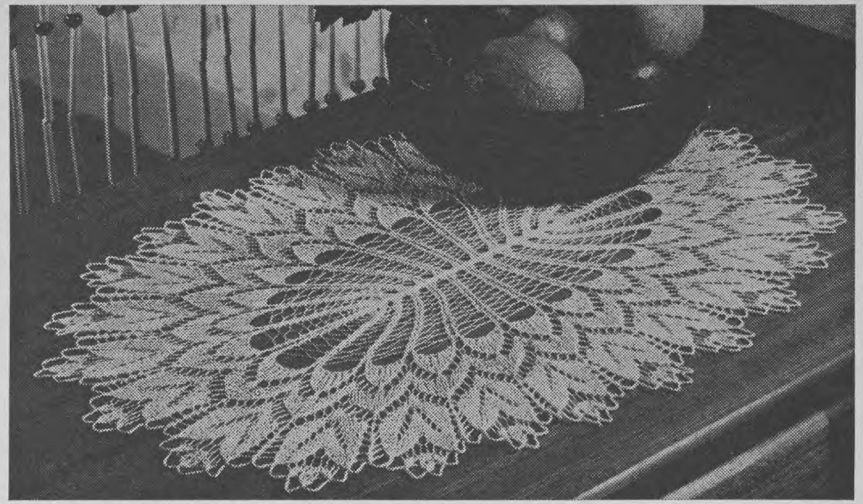
Roy Abrahamson, advertising account representative with J. Walter Thompson Co., claimed advertising had a ready defense against charges of unethical practices. "Unethical practices flourish in dark places, in secret," he said. "Did you ever hear of a secret advertiser? The essence of advertising is that its message be seen or heard by a maximum number of people." Advertising attracts, he added. The consumer examines the product and makes her decision. She is not the harassed housewife, the bewildered bundle of indecision she's sometimes made out to be. Far from it. "Today's consumer is decisive, skeptical and tough. Because of her considered shopping choices, only 1 in 26 new products survives. More than 95 per cent fail, suggesting it is the manufacturer and not the consumer who needs our benevolent concern."

Provided the individual is free and eager to make her considered choice, Mr. Abrahamson concluded, high standards will prevail and the inferior and unethical will be cast out.

Lyn Jamison, manager of the Packaging Association of Canada, agreed. "If the quality for the price isn't obvious, if the product is overpackaged, if it fools the consumer, it only happens once — on the first purchase. And today, a Canadian manufacturer must sell a customer the same product twice to start to make a profit."

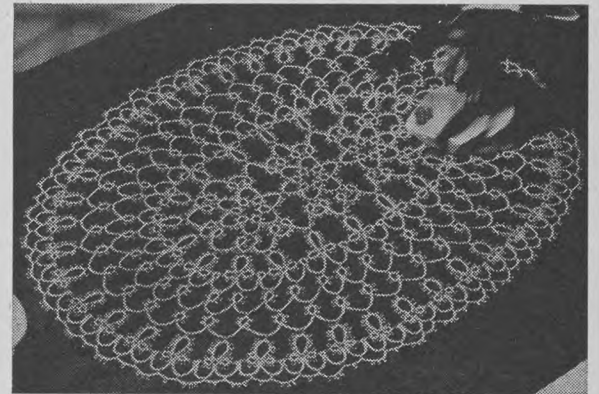
I. R. Dyck, general manager, Winkler Canneries, Winkler, Man., described the consumer as the food manufacturer sees her. "The manufacturer is looking for an informed consumer who buys knowledgeably. She does not fall prey to the gimmicks of the get-rich-quick operators. She is a repeat customer for quality merchandise. She's necessary to the success of the ethical manufacturer."

Consumer — victim or villain? It appears we choose our role. V

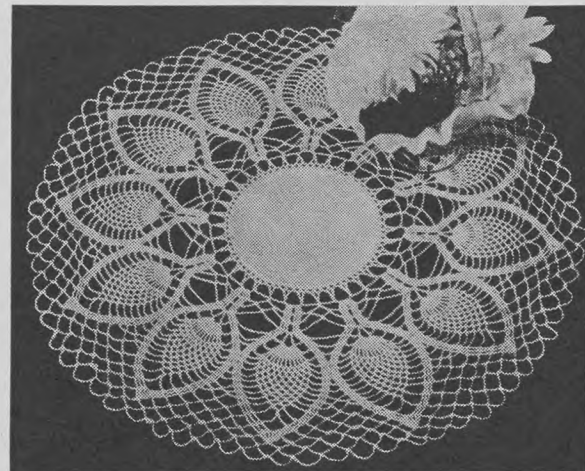


Order Leaflet No. K-8583, 10¢, for knitting instructions for the oval table center pictured above. Finished piece of knitted lace measures 14" by 20".

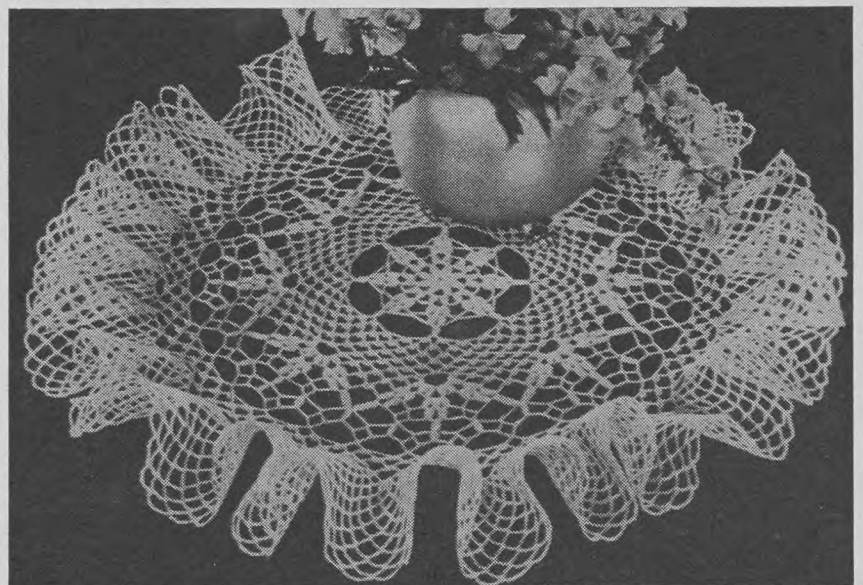
HANDICRAFTS



Tatting creates a 15" by 12" oval mat to flatter your table. For tatting instructions order Leaflet No. T-6784, 10¢.



"Palm Fronds" is the name given this circle mat, 12½" in diameter. The crocheted motif is worked around a 4" circle of linen. Crochet instructions are given on Leaflet No. C-117, 10¢.



A generous ruffle rims the 15¼" diameter of a dainty doily called "Frosty Star." For crochet instructions, order your copy of Leaflet No. C-147, 10¢.

For handicraft patterns pictured above please address your order to Country Guide Needlework Dept., 1760 Ellice Ave., Winnipeg 21, Man.

NEWS

from the BUREAU

June is busting out all over!

Once again, it's "June Is Dairy Month" time and millions of Canadians will get the message. Your set-aside dollars will be hard at work throughout the month-long promotion:

500 billboards across the country will carry the "June Is Dairy Month" theme. 7,500 stores will display full-colour material that hammers home the message at point-of-sale. There'll be a hard-selling big size advertisement in daily newspapers and a slightly smaller version in weeklies. Advertisements in food, restaurant and dairy journals. And this column is appearing in farm papers.

A special feature of "June Is Dairy Month" is the Bureau's sponsorship of "Flashback," popular Sunday night C.B.C. television program.

"June Is Dairy Month" will be the feature of special editorial releases from our Home Services department and we can expect a lot of support from all media.

Once again, "June is busting out all over" for our "June Is Dairy Month" campaign. It's designed to sell all dairy products... and of course that's what the set-aside and the Bureau are working together to do.



THE CANADIAN DAIRY FOODS SERVICE BUREAU

147 Davenport Road, Toronto 5, Ontario

FREE

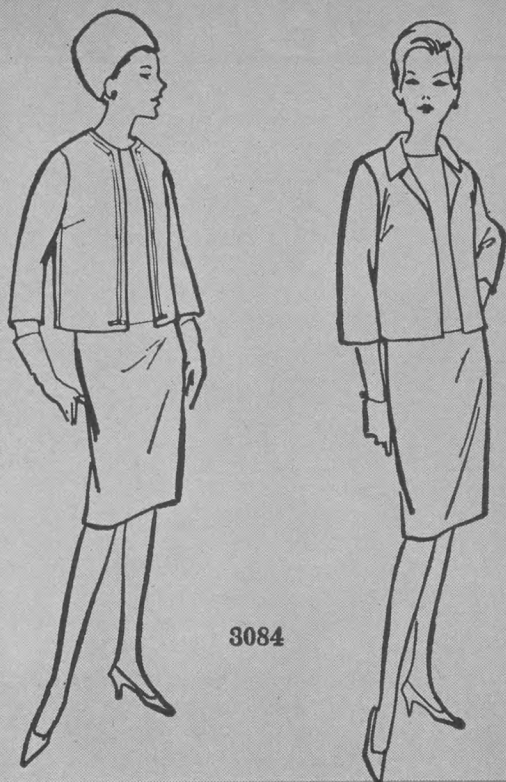
80-page Leathercraft Catalogue

Write today to

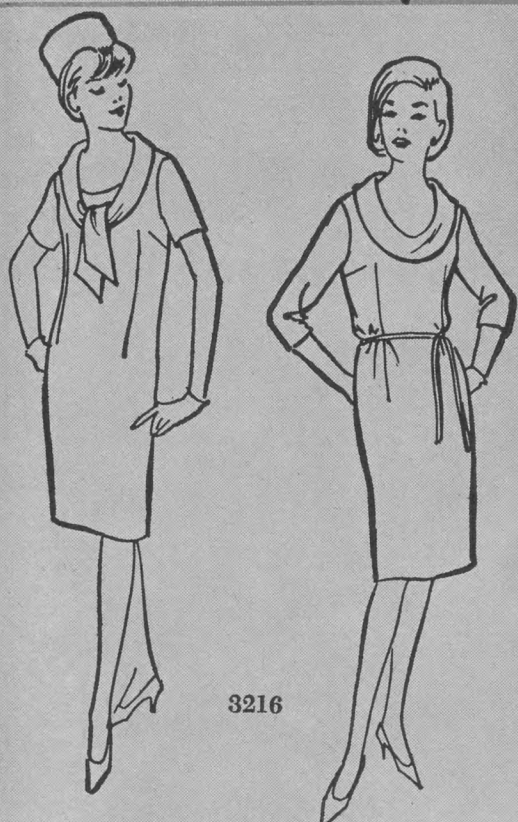
TANDY LEATHER COMPANY
Box 340, Dept. AD, Barrie, Ont.

Half Sizes . . .

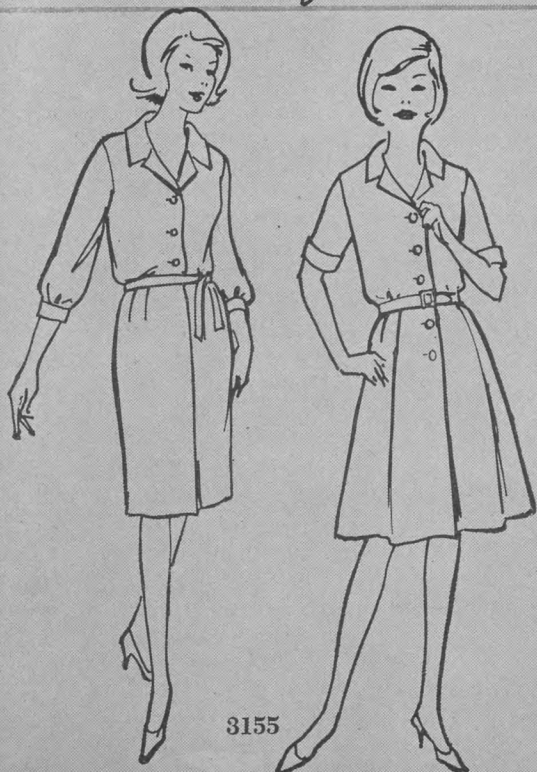
Whole Wardrobe



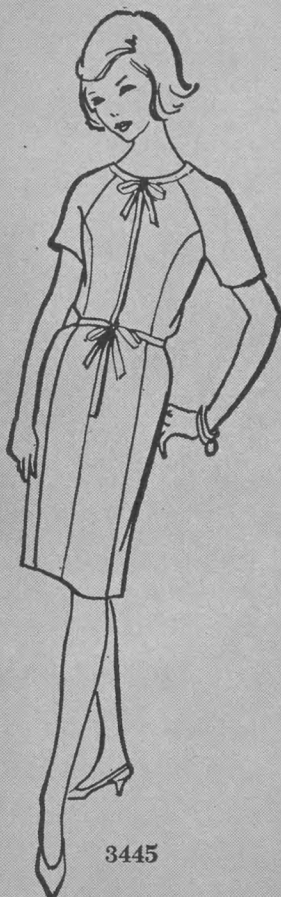
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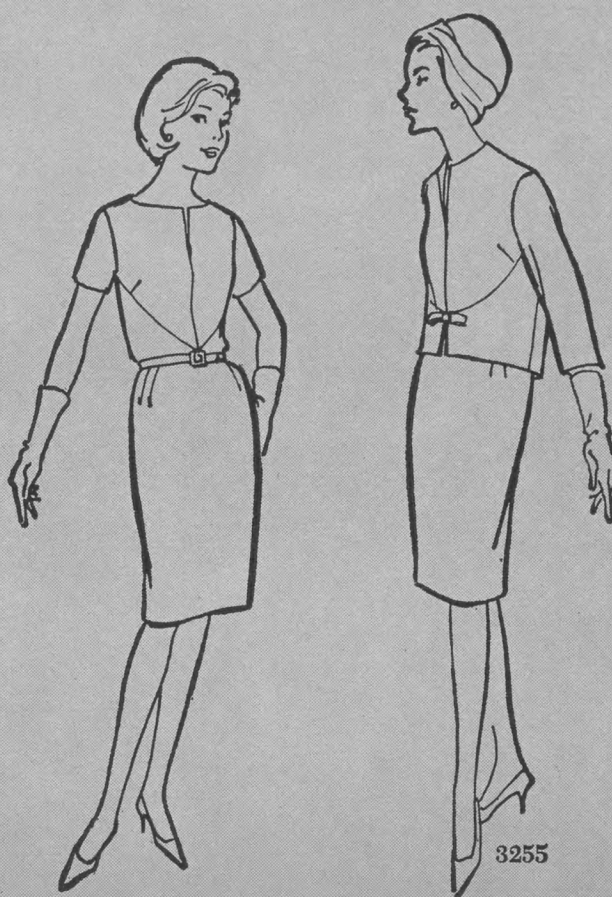
3216



3155



3445



3255

No. 3445. There's figure flattery in the artful seaming of this semi-fitted, Princess-styled dress with self-bound neckline, raglan sleeves. A bow tops the fly front zipper closing. Belt optional. Sizes 12½, 14½, 16½, 18½, 20½, 22½. Price 75c.

No. 3084. Separates work wardrobe magic! A side-zippered slim skirt teams with back-buttoned, short-sleeved overblouse in matching or contrasting color and fabric. Chanel jacket, collarless or with notched collar, completes costume. Available in sizes 12½, 14½, 16½, 18½, 20½, 22½. Price 75c.

No. 3216. Span the seasons by sewing both versions of this semi-fitted dress. One offers short sleeves, tie-draped scooped neck; the second features low, cowl neckline, ¾ sleeves and tie belt. Order from sizes 12½, 14½, 16½, 18½, 20½, 22½, 24½. Pattern price is 75c.

No. 3155. The popular shirt dress may be made with darted slim skirt, self-tie belt and button-cuff ¾ sleeves, or with front-pleated cone-shaped skirt, short roll-up sleeves and buckled self-belt. Sizes 14½, 16½, 18½, 20½, 22½; 75c.

No. 3255. A trimly tailored jacket dress takes you everywhere in style. Short-sleeved dress features a slit neckline on a shaped bodice, side zipper closing, slim skirt with kick pleat at back, buckled self-belt. Note the hook and bow closing on the shaped jacket front; jacket back falls straight. Order in sizes 12½, 14½, 16½, 18½, 20½, 22½. Price is 75c.

Country Guide Pattern Department

1760 Ellice Ave., Box 4001, Terminal "A",
Winnipeg 21, Man. Toronto, Ont.
(No C.O.D. orders, please)

Please send Butterick

Pattern No. _____ Size _____ Price _____

Pattern No. _____ Size _____ Price _____

To _____

Watching Sharp-tailed Grouse

Story and photos by DOUG GILROY

IF YOU'RE SITTING in a blind in the middle of a hundred-odd dancing sharp-tailed grouse, you can talk

in moderate tones, rattle around and make other noises, but don't blow your nose. This is the conclusion

that Les Kilmister and I arrived at recently when we were photographing "sharpies" on one of their ancestral dancing grounds near Gibbs, Sask.

It was early dawn. The sun was just beginning to peek over the edge of the horizon; sharp-tailed grouse were all around us; booming calls and stamping feet turned this remote piece of prairie into a place of action and excitement. So completely "gone" were the birds with the high fever of the dance that even when we looked out over the top of the blind they paid us no heed.

Suddenly (having a bit of a cold) I gave my nose a good old blow. The effect on the dancers was the same as if I had fired both barrels of a shotgun. With a mighty whirr of

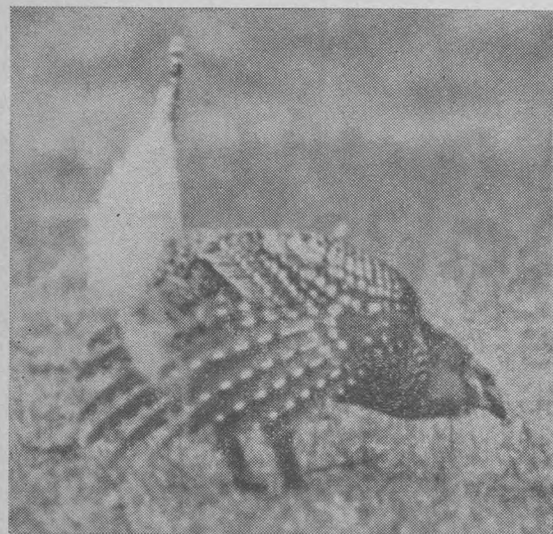
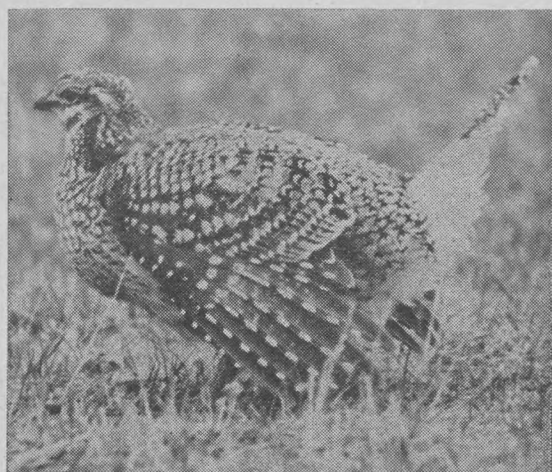
wings the place was made vacant in an instant. However, the mad primal instinct to dance at dawn was not to be denied and in less than half a minute they were back "going to town" as hard as ever.

Why a nose blow would have such a startling effect is anybody's guess. I am quite aware that when some people blow noses it does sound like a fog horn, but I am convinced I didn't give it that kind of blow. It was much more delicate.

Les Kilmister suggested that it may have (to the grouse) sounded like the swish of a hawk rushing in on set wings. A few days previous to this, in the afternoon, we were watching sharp-tails dancing when a marsh hawk swooped in low over the knoll. The birds took off in exactly the same way. So who knows—it could be.

We might add that to see the dance of the sharp-tailed grouse in early hours of morning is to witness one of the finest bits of prairie lore imaginable.

The age-old dance of the sharp-tailed grouse takes place every spring. On the remote piece of prairie where these pictures were taken 100 birds gathered an hour before daylight to perform their dancing ritual



Here is the cock (they are the only ones that dance) in typical dancing pose. The purple air sacs on the side of his neck are puffed out and with feet that stamp so fast they are only a blur, he glides about like a mechanical toy



Each bird has a partner and they bow and gyrate around each other with the vigor of human jitterbugs. As the dance is about to conclude each bows politely to his partner. Then, still facing each other, they squat, rest briefly and suddenly as if on signal they leap to their feet and begin dancing again

Boy and Girl

Woodland Rhymes

by EDITH MOSHER

ALONG THE EDGE of Lonesome Lake, among the frozen willows, a little frog had made his bed, the mossy stones, his pillows, the oozy mud, his coverlet, his mattress and his spring. And here, through chilly winter nights, he dreamed of pleasant things.

Of April moonlight on the lake; of sunshine, and — his highlight — those tasty, juicy mayflies winging lakeward through the twilight.

Then one cold day, a farmer lad through crunchy snow came swishing, with ax and saw and pole and line, to do some winter fishing.

He chopped some ice; he threw it out, upon the lakeshore boggy. That ice was Froggy's bedroom wall; and with it out came Froggy!

The boy forgot about the fish that he had come to get. "Oh, boy!" he

said, "A little frog. He'll make a dandy pet!"

And so he carried Froggy home deep in his jacket pocket. Poor Froggy feared he was in space, sealed tightly in a rocket.

That jacket pocket was so dry. It grew too hot — then hotter; then, just as Froggy cried for help, he found himself in water!

... A heap of stones ... green waving plants ... and goldfish — what a place! Frog gave a jump. His nose went *bump*. It was a big glass case.

For days he sulked behind those plants. But he was never slighted. The children gathered all around, oh my, were they excited!

"Here, Froggy, try some turtle food." "Hey, Frog, come have some bacon." They thought he must be

needing food, but kids can be mistaken.

And then one cloudy, damp March day, their Scottish uncle Bobby, came all the way from Montreal to see their brand-new hobby.

"Hoot mon," said he, "what's this I see? Ye'll have the wee frog weeping! Frogs need no food in winter-time. That's when they should be sleeping. Come, get a pail. Off to that lake we'll tote the little creature. If kept a captive, he may die. Let's give him back to Nature."

Though sad indeed, the kids agreed to Uncle Bob's suggestion. They lifted Froggy from his rock. Poor Froggy asked no question. Until — oh, joy — he saw his lake! The mild March rain was falling. He dived beneath the melting ice, where his old home was calling.

He gave the kids a solemn wink, for frogs hold no resentment; then cuddled down in oozy mud with sighs of great contentment.

But sometimes now, on summer nights, he does a bit of bragging. In fact, they say in Lonesome Lake his tongue is always wagging of life in glass aquariums, of strange exotic dishes, of that posh life he left behind. — Smack! Mayflies are delicious!

The Waters Speak

by JEAN GILCHRIST

1. I am the longest river in Canada. The explorer who discovered me named me River of Disappointment when he found that I flow to the Arctic Ocean rather than the Pacific, as he had hoped. I now bear the explorer's name.

2. I am a large lake. On my north side is Manitoulin Island, the largest island in the world in a body of fresh water. Some people say that, on the map, I look like a man with a pack on his back. The "pack" is really Georgian Bay.

3. I am a bay. I have the highest tides in the world. Early settlers sailed on me and built habitations on my shores. I touch two provinces.

4. One of the Prairie Provinces has a salt-water boundary. That's where I touch it. I am a large bay named for an explorer.

5. I am the largest body of fresh water in the world. People in both Canada and the United States have summer fun on my many beautiful beaches. My name indicates my importance.

Answers

1. Mackenzie River. 2. Lake Huron. 3. Bay of Fundy. 4. Hudson Bay. 5. Lake Superior.

Letters

New Poultry Products

Congratulations on your New Poultry Products article in the April issue. You ably interpreted both the spirit and effectiveness of the work being done at Cornell.

S. L. RODWAY,
General manager,
Poultry Products Institute
of Canada, Inc.

What Size Manure Pit?

In your article on liquid manure in the May issue, you only gave the two dimensions for the size of the various pits. Could you provide me with the third?

J.B.,
Campbellcroft, Ont.

Our faces are red! A sentence that immediately preceded the table of pit sizes, in Cliff Faulkner's manuscript, was somehow omitted. It read, "The average pit depth is 6 feet." — EDITOR.

Water for Little Pigs

I agree with your recent article, "Water for Little Pigs." I always had water in front of the little pigs I raised from the time they were a few days old. It is surprising how fast they learn to drink. The water refreshes them and seems to give them more pep and vigor.

The sow's milk supply sometimes lessens after 3 weeks or a month, and it saves wear and tear on her

when the pigs are thirsty if they can drink water. This also helps prevent setbacks at weaning time.

H. A. McDONALD,
Sylvan Lake, Alta.

Likes Round House

In your March issue, you showed the home of Mr. and Mrs. George Leussink. My husband and I were very impressed. We have a family of five and wish to build this fall. This round home sounds like just the dream house we've been looking for.

M.S.,
Shad Bay, N.S.

More Hayseed Humor

We enjoy Reverend M. L. Goodman's column, "Let's Think It Over" very much each month. There is always something for everyone in each issue. Let's have more Hayseed Humor by Peter Lewington. These snapshot sidelights of farm life are exceptionally good.

JOHN DORKINGS,
Orillia, Ont.

Roots Go Down 4 Feet

The article "Soil Testing Comes of Age" in your April issue gives a comprehensive coverage of the subject, but I must take exception to one statement commenting on the practice of taking soil samples to a depth of 2 feet. You make the statement, "Some feel that it is a waste

of time to worry about the amount of available plant food that is located well below the root zone." It is well known that cereal crops usually root to a depth of approximately 4 feet and can obtain moisture and plant nutrients to this depth. While it is true that the amount of available phosphorus below the plow layer is usually small, there may be appreciable amounts of available nitrogen in the subsoil.

R. A. HEDLIN, Head,
Soils Science Department
University of Manitoba.

For the Reference Library

Your most recent issue was outstanding. This is the kind of paper that farmers should read and retain in their reference libraries.

H.H.,
New Westminster, B.C.

A Standard to Aim For

This is the first time an item has impressed me strongly enough to actually take pen in hand, though the many fine articles in your paper have often been tempting. We read with great interest your article "Sauve Defines Poverty," page 98 of the March issue. The points laid out by Sauve were very praiseworthy and indicated a standard much to be desired. Here in the B.C. part of the Peace River country the guide lines he mentions are usually the result of a lifetime's endeavor and much more the exception than the rule.

One reads in the papers across the country items about the Peace

River dam at Hudson Hope and more recently the widely mouthed reduction in electric power rates to the domestic consumer. How few people in Canada realize that there are many rural homes in this area without electric power; that the power lines were brought to closely grouped homes, ruthlessly eliminating those slightly farther away. For those of us, living as we do without even this not inconsiderable aid, much less plumbing or an adequate income, the guide lines set out by Mr. Sauve cannot be implemented any too soon.

Educating these people is by no means the whole answer! Here we

News Highlights

(Continued from page 15)

tribution areas as now known will eventually disappear.

Under the Act, concentrated milk producers will be represented on the Milk Producers' Board and all producers of grade A milk will be able to join the price pool in an orderly way, at the discretion of the Milk Board. ✓

RECOMMEND CHANGES IN HOG TESTING AND GRADING

A blueprint for change for this country's swine improvement program was drawn up at a recent meeting in Ottawa. The meeting sketched out a three-point program which would see hog testing programs expanded, hog carcass scoring procedures revised and the country's hog grading system changed. Taking part in the meeting which was a follow-up to the hog improvement conference sponsored by the Canadian Federation of Agriculture in 1964, were voting delegates from provincial producer organizations as well as consulting representatives from the Provincial and Federal Departments of Agriculture, the Meat Packers Council of Canada, and the departments of animal science at Canadian universities.

The meeting called for three new testing programs to be launched to

supplement the present ROP progeny testing policy.

The first would be a home herd performance test to evaluate boars and gilts. It would be designed to encourage routine testing of all pigs produced in the herd, using scales to measure growth rate and the back-fat probe to measure carcass merit.

Next would be a progeny test of herd sires, measuring feed conversion, growth rate and carcass merit.

The third test would involve boar performance and would call for a

test group consisting of two boars and one or two barrows or gilts from each litter. Ultrasonics would be used to estimate lean content of live boars.

Dealing with the present ROP test, the meeting called for substantial changes in carcass measurement and scoring procedures.

With respect to hog grading, the meeting agreed on the need for a more accurate prediction of the lean content of carcasses, and called for a new concept for commercial carcass evaluation. It would rate hogs according to predicted lean content of the carcass rather than by specific grades. ✓

BUDGET AIDS FARMERS

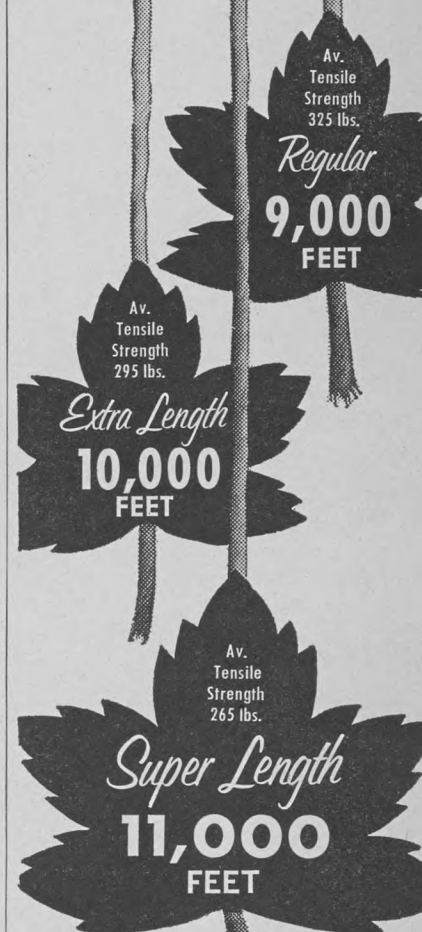
Farmers will benefit from two tax items which appeared in the Federal Budget and which deal with their industry. One provides for an accelerated 25 per cent per annum rate of depreciation allowance for income tax purposes on grain storage facilities constructed to December 1, 1966. This applies to farmers and firms building commercial storage. The other will enable farmers who clear land and lay drainage tile to write off the expenses as tax allowance.

The Canadian Federation of Agriculture states that few tax or tariff changes were announced in the budget because the government is waiting for the report of the Royal Commission on Taxation in the one case and is in process of GATT tariff negotiations in the other. ✓



"When you get established, send me a load of feeder cattle."

NOW... THREE LENGTHS



New economy by BRANTFORD

Designed to meet the trend to lighter bales, the new 11,000 ft. twine ties 620, 36"-bales. Yet it has plenty of tensile strength (265 lbs. average) to assure freedom from annoying breakage delays. It complements perfectly the use of Brantford's 9,000 ft. and 10,000 ft. twines where the baling operation calls for heavier bales. Like all three lengths of Brantford Baler Twines, it is guaranteed knotless and is packed in convenient oil-seal cartons.



THE BRANTFORD CORDAGE CO., BRANTFORD, ONT.

have high school graduates (or better) preferring the rural life who cannot expand or pursue new endeavors in their operations due to lack of funds. Jobs are of short duration and offer little security. The man cannot leave the wife and children alone in the cold winter months to seek employment and the summers must be spent on farm improvements.

We particularly agreed with the last paragraph. Certainly creative and productive work is the most satisfying activity a man can engage in—the sense of achievement makes him mentally 10 feet tall, with a pride in himself beyond measure. Without this he is a menace to society and a plague to himself and his family.

Thank you for a fine article and an excellent paper.

O.L.,
Groundbirch, B.C.

Workshop Safety

The Workshop Department of the April Country Guide carried a suggestion that paint brushes and gasoline be used in the workshop to clean grease from parts.

The used paint brush part is a good idea but using gasoline is prob-

ably the best method known of inviting disaster. Not only is it a certainty that you will cause a major fire but any insurance you carry will also be void.

All major oil companies handle a recognized cleaning solvent that is not only safe but has better cleaning characteristics than gasoline.

R.W.L.,
Athabasca, Alta.

The editor of the Workshop Department raises his scorched head to acknowledge his error and to urge the use of safe cleaning solvents.—EDITOR.

More about Feed Grain Policy

I want to comment on your editorial about feed grain policy and about the demands of Quebec that the price of feed grains should be the same across all of Canada. Quebec farmers must realize that hogs and cattle sell for substantially more money in Quebec than they do in the Prairies. The difference in price should more than pay the freight on the grain each animal consumes. We must remember that the Western farmer pays the freight on grain as far east as the Lakehead.

E. F. RICHARDSON,
Semans, Sask.

CHALLENGE FEEDING *Continued from Page 17*

says Ray. "We look on this increase in feed as simply a gradual change to the high level that the cow will be getting when she starts milking. There is enough stress in calving and starting to produce milk without being switched from 4 lb. to 20 lb. of grain per day."

Several cows in the Selkirk herd were on their first lactation under the new feeding program when I called in the spring. One was producing 68 lb. of milk 1 month after calving compared to 48 lb. at the same time in her 1964 lactation. Another cow, after almost 2 months' production, was producing 86 lb. compared to 60 lb. A third was producing 80 lb. compared to 60 lb. These cows were getting only 20 lb. of grain per day in the current lactation but their production reflected the conditioning they got. Some had been fed as much as 25 lb. per day in the previous lactation, but without conditioning were

not able to make good use of this extra grain.

Before the change, dry cows at the Selkirk farm had been fed 4 to 6 lb. of grain a day up to calving and then 16 to 18 lb. per day immediately after calving.

Drying off these heavy producing cows can be a problem.

At the Selkirk farm, this is the one time when abrupt changes in management are used. "We try to stress the cow out of production," says Ray. "We make several changes in her management quickly; cut her grain back, reduce her water supply, and move her to another barn."

The Holtmans try to hold back on the milking when they wish to dry up a cow. John Holtman points out that this can only be done if there is no danger of udder infection. They also put their cows in with the young stock in unfamiliar surroundings and away from the normal routine of the milking barn. V

Continued from Page 22

EGG FARM IN THE WHEATLANDS

layers. The central section — or service area — contains a fine big office, a sorting and grading room, a cold storage unit and a feed mixing room.

Fresh air is brought in via a continuous intake along the center of the roof, and the foul air expelled through exhaust fans located along the walls. These fans are thermostatically controlled, with a thermostat for each pair of fans. An extra fan at the end of the building is set to run continuously. At present, the Johnstons do not intend to heat the layer sections, but the service area is electrically heated. Power comes through the plant's own sub-station a few yards away from the main building and all wiring is underground.

"This is a mechanical operation, not a completely automated one," Stan explained. "Rather than spend the extra money on full automation, we decided to build a larger plant. This building is wider than most, which gives us plenty of extra room if we want to handle more birds."

Having two wings to the layer house enables the Johnstons to carry flocks of specific ages in each end so there will be continuous egg production. It is also an aid in disease control. The birds are kept in 8" by 16" suspended wire laying cages, two birds per cage. Each battery contains four rows of cages, two up and two down. Present plans call for replacing the laying flocks about every 75 weeks. The birds are from special layer strains. One wing contains H & N nicked chicks purchased in Alberta, and the other will house Shaver chicks from Ontario.

FEED STORAGE

Feed ingredients are stored in four big steel hoppers on the north side of the building designed to hold a 40-day supply of grain and a 30-day supply of concentrate. This is piped into a mixing machine in the building's service area. The ration of 60 per cent wheat, 25 per cent oats and 15 per cent concentrate is carried to the continuous trough system

of the laying cages by a self-propelled cart which the operator rides on. This feed cart fills both upper and lower troughs at the same time.

A continuous water trough above each feed trough keeps a steady stream of fresh water flowing past the birds at all times. The water drains into a small overflow tank at the end of each row from where it flows into a main sump which is pumped out from time to time. Situated beside the Eston town reservoir, the laying house has a permanent source of good water which is a big factor in an area where water is a very valuable commodity. "That is one reason I was willing to pay a pretty stiff price for this particular piece of land," said Stan.

Manure from the upper cages drops onto boards located directly underneath. It is pushed off the boards with a scraper so that it falls between the cages to a broad gutter in the concrete floor. Manure from the bottom layer of cages drops directly into this gutter from where the operator pushes it to the back of the building with a self-propelled scraper cart designed specially for this job. A standard barn cleaner in a deep narrow gutter at the end of each wing carries the droppings outside where they can be spread on the land.

Manager of the Johnston layer operation will be Tom McAllister of Eston, a former schoolmate of Stan's. Tom used to run the water treatment plant for the town.

"Both of us are going into this thing cold," Stan admitted. "We know nothing about poultry, but we're learning fast!"

One of the most vital factors in an operation of this type is disease control. Although their enterprise is located a long distance from other flocks, the Johnstons have decided on a strict policy as far as visitors are concerned. Like many other poultrymen and stockgrowers, they are aware that serious diseases can be spread by visitors who go from farm to farm. V



Hi Folks:

I was just cleaning out my brand new milking parlor when Ted Corbett walked in.

"Have you got any insurance on this place?" he asked, looking around with an appraising eye.

"Of course I have insurance," I grunted. "You know I always carry insurance."

He shook his head sadly. "That's a pity because, if you carry protection, sooner or later you're going to have a fire."

"That's a crazy idea, even for you. Who have you been talking to now?"

"Nobody. It's a theory that us modern thinkers have worked out. There's not much use me trying to explain it because you have one of those everyday sort of minds. As long as people like you have the vote us more advanced types won't be able to get anywhere."

"Where do you want to get?"

"I want to get to where we can ban this here Bomb that has everybody so scared. Then we can all settle down to a peaceful life."

"You figure that will give us a peaceful life?" I asked him.

"Of course it will!" he exploded. "A man of good will has no need for modern weapons!"

"I don't know about that," I said doubtfully. "It seems to me Neville Chamberlain was a man of good will. And the fact that we had no modern

weapons didn't seem to cut any ice with the Nazis. I think they kind of preferred it that way."

"I can see you're a hopeless reactionary. It's no good me trying to convince you how immoral these weapons are."

"You mean it's less immoral to destroy a city with a thousand planes dropping old-type bombs than with a missile carrying an atomic head?"

"Well, there would be a danged sight less fallout," he nodded.

"We were talking about moral values," I reminded him, "how it's more moral to konk a man with a club than to blow him up."

"If there's one thing I can't stand it's a cynic," he said.

"I know a man named Mao who would be happy to go back to clubs because he could put up 10,000 club swingers for every one we could muster. I wonder how many Ban-the-Bomb marchers they have in China?"

"Spoken like a true Imperialist," he growled.

"I'll bet you they don't have very many. The other day I saw a CBC film about China showing a bunch of little girls being trained to shake their fists in our direction and shout 'POW!' I don't know what this means in Chinese, but it doesn't exactly mean 'Gung Ho' in our language."

"It's up to us enlightened ones to make the first step in the right direction," he countered.

"Well you go ahead and make your step," I told him. "As I said, I know somebody who is really pulling for you. In the meantime, I think I had better keep my insurance."

Sincerely,
PETE WILLIAMS.